Stedman's Medical Dictionary

lamina, pl. **laminae** (lam′i-na, lam′i-ne) [NA]

Thin plate or flat layer. See also layer, stratum. [L]
l. **affix′a** [NA] that part of the medial ependymal wall of the lateral ventricle of the embryonic brain that in later development becomes adherent to the superior surface of the thalamus and thus comes to form the floor of the central part of the lateral ventricle; it covers the thalamostriate and choroidal veins.
l. **ala′ris** [NA] *alar l. of neural tube*
alar *l.* of neural tube the dorsal division of the lateral walls of the neural tube in the embryo; it gives rise to neurons relaying afferent impulses to higher centers; in the adult such neurons compose the sensory nuclei of the spinal cord and brainstem.*l.* alaris [NA], alar *plate* of neural tube, dorsolateral *plate* of neural tube, *l.* dorsalis, wing *plate*;
***lam′inae* al′bae cerebel′li** [NA] layers of white substance seen on section of the cerebellum.*laminae* medullares cerebelli;
l. **ante′rior vagi′nae mus′culi rec′ti abdo′minis** [NA] *anterior layer of rectus abdominis sheath*
l. **ar′cus ver′tebrae** [NA] *l. of vertebral arch*
basal *l.* **1.** an amorphous extracellular layer applied to the basal surface of epithelium and also investing muscle cells, fat cells, and Schwann cells; thought to be a selective filter and to serve both structural and morphogenetic functions. It is comprised of a 20-100 nm network of file filaments called the *l.* densa which appears dense in the electron microscope, and on either side of this layer is a less dense layer called the *l.* rarae; See also basement *membrane*, *l.* densa. **2.** *l. densa*
basal *l.* of choroid *l. basalis choroideae*
basal *l.* of ciliary body the inner layer of the ciliary body, continuous with the basal layer of the choroid and supporting the pigment epithelium of the ciliary retina.*l.* basalis corporis ciliaris [NA], basal *layer* of ciliary body;
basal *l.* of cochlear *basilar membrane*
l. **basa′lis** [NA] *basal l. of neural tube*
l. **basa′lis choroi′deae** [NA] the transparent, nearly structureless inner layer of the choroid in contact with the pigmented layer of the retina.basal *l.* of choroid, basal *layer* of choroid, Bruch's *membrane*, Henle's *membrane*, *l.* vitrea, vitreous *lamella*, vitreous *membrane* (3);
l. **basa′lis cor′poris cilia′ris** [NA] *basal l. of ciliary body*
basal *l.* of neural tube the ventral division of the lateral walls of the neural tube in the embryo; it contains neuroblasts giving rise to somatic and visceral

motor neurons.*l.* basalis [NA], basal *plate* of neural tube, *l.* ventralis, ventral *plate* of neural tube;
basal *l.* of semicircular duct *basal membrane of semicircular duct*
basement *l.* *basement membrane*
basilar *l.* *basilar membrane*
***l.* basila´ris coch´leae** [NA] *basilar membrane*
boundary *l.* a basement membrane-like structure that invests muscle cells, fat cells, and Schwann cells. See also basement *membrane*, basal *l.*
***l.* cartilag´inis cricoi´deae** [NA] *l. of cricoid cartilage*
***l.* cartilag´inis latera´lis tubae auditivae** [NA] * *official alternate term for lateral l. of cartilaginous auditory tube*
***l.* cartilag´inis media´lis tubae auditivae** [NA] * *official alternate term for medial l. of cartilaginous auditory tube, medial l. of cartilaginous auditory tube*
***l.* cartilag´inis thyroi´deae** [NA] *l. of thyroid cartilage*
***l.* choriocapilla´ris** *choriocapillary layer*
***l.* choroi´dea** *epithelial l*
***l.* choroi´dea epithelia´lis** *epithelial l*
***l.* choroidocapilla´ris** [NA] *choriocapillary layer*
***l.* cine´rea** *l. terminalis of cerebrum*
***l.* cribro´sa os´sis ethmoida´lis** [NA] *cribriform plate of ethmoid bone*
***l.* cribro´sa scle´rae** the portion of the sclera through which pass the fibers of the optic nerve.cribrous *l.*, perforated *layer* of sclera;
cribrous *l.* *l. cribrosa sclerae*
***l.* of cricoid cartilage** a quadrate plate forming the posterior part of the cricoid cartilage. It resembles the shield of a signet ring, the arch of the cricoid representing the remainder of the ring.*l.* cartilaginis cricoideae [NA];
deep *l.* *deep layer*
***l.* den´sa 1.** the electron-dense layer of the basal *l.* as seen in the electron microscope; See also basement *membrane*. **2.** the extraordinarily thick basal *l.* of the renal glomerulus.basal *l.* (2);
dental *l.* *dental ledge*
***l.* denta´ta** *vestibular labium of limbus of spiral lamina*
dentogingival *l.* *dental ledge*
***l.* dorsa´lis** *alar l. of neural tube*
***l.* du´ra** the hard layer lining the dental alveoli.
***l.* elas´tica ante´rior** *anterior limiting layer of cornea*
***l.* elas´tica poste´rior** *posterior limiting layer of cornea*
elastic *laminae* of arteries 1) external: the layer of elastic connective tissue lying immediately outside the smooth muscle of the tunica media; 2) internal: a fenestrated layer of elastic tissue of the tunica intima.elastic *layers* of arteries, Henle's fenestrated elastic *membrane*;
episcleral *l.* the delicate moveable layer of loose connective tissue between the external surface of the sclera and the fascial sheath of the eyeball.*l.* episcleralis [NA];
***l.* episclera´lis** [NA] *episcleral l*
epithelial *l.* the layer of modified ependymal cells that forms the inner layer of the tela choroidea, facing the ventricle.*l.* epithelialis [NA], epithelial choroid *layer*, *l.* choroidea epithelialis, *l.* choroidea;

***l.* epithelia´lis** [NA] *epithelial l*
***l.* exter´na cra´nii** [NA] *outer table of skull*
***l.* fibrocartilagin´ea interpu´bica** *interpubic disc*
***l.* fibroreticula´ris** a layer of the basement membrane in continuity with associated connective tissue; it is often discontinuous and may be lacking entirely in some cases.
***l.* fusca of sclera** an exceedingly delicate layer of loose, pigmented connective tissue on the inner surface of the sclera, connecting it with the choroid.*l.* fusca sclerae [NA], brown *layer*, *membrana* fusca;
***l.* fus´ca scle´rae** [NA] *l. fusca of sclera*
hepatic *laminae* the plates of liver cells that radiate from the center of the liver lobule.
***l.* horizonta´lis os´sis palati´ni** [NA] *horizontal plate of palatine bone*
***l.* inter´na cra´nii** [NA] *inner table of skull*
internal medullary *l.* See medullary *laminae* of thalamus.
***l.* internal ossium cranii** *vitreous table*
iridopupillary *l.* embryonic precursor of the anterior stroma of the iris which forms the inner (posterior or deep) wall of the primary anterior chamber of the eye. Its central portion becomes attenuated as the pupillary membrane (membrane pupillaris [NA]).
labiogingival *l.* a band of ectodermal epithelial cells growing into the mesenchyme of the embryonic jaws between the developing lip and the growing gingival elevation; it later opens to form the labiogingival groove.
lateral *l.* of cartilaginous auditory tube the narrow lateral portion of the cartilaginous part of the auditory tube.*l.* lateralis cartilaginis tubae auditivae [NA], *l.* cartilaginis lateralis tubae auditivae [NA], lateral cartilaginous *layer*, lateral *layer* of cartilaginous auditory tube;
***l.* latera´lis cartila´ginis tu´bae auditi´vae** [NA] *lateral l. of cartilaginous auditory tube*
***l.* latera´lis proces´sus pterygoid´ei** [NA] *lateral pterygoid plate*
lateral medullary *l.* of corpus striatum a thin, sharply defined layer of fibers separating the putamen from the globus pallidus.*l.* medullaris lateralis corporis striati [NA];
***l.* of lens** one of a series of concentric layers composed of the lens fibers that make up the substance of the lens.
***l.* lim´itans ante´rior cor´neae** [NA] *anterior limiting layer of cornea*
***l.* lim´itans poste´rior cor´neae** [NA] *posterior limiting layer of cornea*
***l.* lu´cida** the lightly staining layer of the basement membrane in contact with the plasmalemma of epithelial cells or other cells having an investment of basement membrane.
medial *l.* of cartilaginous auditory tube the broad medial portion of the cartilaginous part of the auditory tube.*l.* medialis cartilaginis tubae auditivae [NA], *l.* cartilaginis medialis tubae auditivae [NA], medial cartilaginous *layer*, medial *layer* of cartilaginous auditory tube;
***l.* media´lis cartila´ginis tu´bae auditi´vae** [NA] *medial l. of cartilaginous auditory tube*
***l.* media´lis proces´sus pterygoi´dei** [NA] *medial pterygoid plate*
medial medullary *l.* of corpus striatum a fiber layer separating the medial and lateral segments of the globus pallidus.*l.* medullaris medialis corporis

striati [NA];
***lam'inae* medulla'res cerebel'li** *laminae albae cerebelli*
***lam'inae* medulla'res thal'ami** [NA] *medullary laminae of thalamus*
***l.* medulla'ris latera'lis cor'poris stria'ti** [NA] *lateral medullary l. of corpus striatum*
***l.* medulla'ris media'lis cor'poris stria'ti** [NA] *medial medullary l. of corpus striatum*
medullary *laminae* of thalamus layers of myelinated fibers that appear on transverse sections of the thalamus; the *l.* medullaris externa marks the ventral and lateral borders of the thalamus and delimits it from the subthalamus and reticular nucleus of thalamus; the *l.* medullaris interna is interposed between the mediodorsal and ventral nuclei of the thalamus and encloses the intralaminar nuclei (centromedian, paracentral, and central lateral nuclei).*laminae* medullares thalami [NA], medullary *layers* of thalamus;
***l.* membrana'cea cartila'ginis tu'bae auditi'vae** [NA] *membranous l. of cartilaginous auditory tube*
membranous *l.* of cartilaginous auditory tube the connective tissue membrane that, with the lateral *l.*, completes the lateral and inferior walls of the cartilaginous part of the auditory tube.*l.* membranacea cartilaginis tubae auditivae [NA], membranous *layer*;
***l.* of mesencephalic tectum** the roofplate of the mesencephalon formed by the quadrigeminal bodies.*l.* tecti mesencephali [NA], *tectum* mesencephali [NA], *l.* quadrigemina, quadrigeminal *l.*, quadrigeminal *plate*;
***l.* modi'oli** [NA] *plate of modiolus*
***l.* muscula'ris muco'sae** [NA] *muscularis mucosae*
nuclear *l.* a protein-rich layer lining the inner surface of the nuclear membrane in interphase cells.
orbital *l.* of ethmoid bone *orbital plate of ethmoid bone*
***l.* orbita'lis os'sis ethmoida'lis** [NA] *orbital plate of ethmoid bone*
osseous spiral *l.* a double plate of bone winding spirally around the modiolus dividing the spiral canal of the cochlea incompletely into two, scala tympani and scala vestibuli; between the two plates of this *l.* the fibers of the cochlear nerve reach the spiral organ (of Corti).*l.* spiralis ossea [NA], spiral *plate*;
***l.* papyra'cea** *orbital plate of ethmoid bone*
***l.* parieta'lis** [NA] *parietal layer*
***l.* parietalis pericar'dii** *parietal layer of serous pericardium*
***l.* parietalis tu'nicae vagina'lis tes'tis** *parietal layer of tunica vaginalis*
periclaustral *l.* *external capsule*
***l.* perpendicula'ris** [NA] *perpendicular plate*
***l.* perpendicula'ris os'sis ethmoida'lis** [NA] *perpendicular plate of ethmoid bone*
***l.* perpendicula'ris os'sis palati'ni** [NA] *perpendicular plate of palatine bone*
***l.* poste'rior vagi'nae mus'culi rec'ti abdo'minis** [NA] *posterior layer of rectus abdominis sheath*
***l.* pretrachea'lis** [NA] *pretracheal fascia*
***l.* prevertebra'lis** [NA] *prevertebral fascia*
primary dental *l.* *dental ledge*

***l.* profun´da** [NA] *deep layer*
***l.* profunda fas´ciae tempora´lis** *deep layer of temporalis fascia*
***l.* profunda mus´culi levato´ris palpe´brae superio´ris** *deep layer of levator palpebrae superioris muscle*
lamina *l.* the layer of connective tissue underlying the epithelium of a mucous membrane.*l.* propria mucosae [NA];
***l.* pro´pria muco´sae** [NA] *lamina l*
lamina *l.* of semicircular duct the meshwork of connective tissue fibers between the semicircular duct and the bony semicircular canal; it encloses the perilymph in its spaces.*membrana* propria ductus semicircularis [NA];
pterygoid *laminae* See lateral pterygoid *plate*, medial pterygoid *plate*.
***l.* quadrigem´ina** *l. of mesencephalic tectum*
quadrigeminal *l.* *l. of mesencephalic tectum*
***l.* ra´ra** the relatively electron-lucent layer on either side of the *l.* densa of the basement membrane.
reticular *l.* a major component of the basement membrane, as seen by light microscopy; it consists largely of reticular fibers and ground substances.
***l.* of Rexed** a division of the gray matter of the spinal cord into nine laminae (I-IX) and a gray area around the central canal (area X) based on cytoarchitectural features; the dorsal (posterior) horn is composed of laminae I-VI, the intermediate zone of lamina VII, and the ventral horn of laminae VIII and IX; general correlation of laminae with major nuclei: I, posteromarginal nucleus; II, substantia gelatinosa; III, IV, nucleus proprius (posterior); V, VI, nucleus proprius (anterior); VII, Clarke's nucleus, intermediolateral cell column; VIII, commissural nuclei, interneurons; IX, motor nuclei of ventral horn.
rostral *l.* a whitish line appearing on perfectly median sections of the brain as a thin bridge connecting the rostrum of the corpus callosum with the lamina terminalis; the rostral *l.* contains no commissural fibers; instead, it corresponds to the line along which the pia mater reflects from the medial surface of one hemisphere to that of the other.*l.* rostralis, rostral *layer*, *teniola* corporis callosi;
***l.* rostra´lis** *rostral l*
secondary spiral *l.* a ridge on the outer wall of the first turn of the cochlea opposite the spiral *l.l.* spiralis secundaria [NA], secondary spiral *plate*;
***l.* sep´ti pellu´cidi** [NA] *l. of septum pellucidum*
***l.* of septum pellucidum** one of the two thin layers of the transparent septum, which extend from the corpus callosum to the fornix; often separated from each other by a space, the cavity of septum pellucidum.*l.* septi pellucidi [NA];
***l.* spira´lis os´sea** [NA] *osseous spiral l*
***l.* spira´lis secunda´ria** [NA] *secondary spiral l*
substantia *l.* of cornea proper substance of cornea, modified transparent connective tissue, between the layers of which are open spaces or lacunae nearly filled with the corneal cells or corpuscles.*substantia* propria corneae [NA];
superficial *l.* *superficial layer*
***l.* superficia´lis** [NA] *superficial layer*
***l.* superficia´lis fas´ciae cervica´lis** [NA] *investing layer of deep cervical*

fascia
***l.* superficia'lis fas'ciae tempora'lis** [NA] *superficial layer of temporalis fascia*
***l.* superficia'lis mus'culi levato'ris pal'pebrae superio'ris** [NA] *superficial layer of the levator palpebrae superioris muscle*
suprachoroid *l.* a layer of loose, pigmented connective tissue on the outer surface of the choroid, resembling and attached to the *l.* fusca sclerae.*l.* suprachoroidea [NA], ectochoroidea, suprachoroid *layer*, suprachoroidea;
***l.* suprachoroi'dea** [NA] *suprachoroid l*
***l.* supraneuropor'ica** that part of the choroid membrane of the third ventricle that forms the roof of the foramen of Monro.
***l.* tec'ti mesenceph'ali** [NA] *l. of mesencephalic tectum*
***l.* termina'lis cer'ebri** [NA] *l. terminalis of cerebrum*
***l.* terminalis of cerebrum** a thin plate passing upward from the optic chiasm and forming the rostral boundary of the third ventricle; membrane closing the rostral neuropore.*l.* terminalis cerebri [NA], *l.* cinerea, terminal *plate*, *velum* terminale;
***l.* of thyroid cartilage** one of the paired (dextra et sinistra) thin quadrilateral plates of the thyroid cartilage that are joined anteriorly and form an open angle posteriorly.*l.* cartilaginis thyroideae [NA];
***l.* tra'gi** [NA] *l. of tragus*
***l.* of tragus** a longitudinal curved plate of cartilage, the beginning of the cartilaginous portion of the external acoustic meatus.*l.* tragi [NA];
vascular *l.* of choroid the outer portion of the choroid of the eye containing the largest blood vessels.*l.* vasculosa choroideae [NA], Haller's vascular *tissue*, uvaeformis, vascular *layer* of choroid coat of eye, vascular *layer*;
***l.* vasculo'sa choroi'deae** [NA] *vascular l. of choroid*
***l.* ventra'lis** *basal l. of neural tube*
***l.* of vertebral arch** the flattened posterior portion of the vertebral arch extending between the pedicles and the midline, forming the dorsal wall of the vertebral foramen, and from the midline junction of which the spinous process extends.*l.* arcus vertebrae [NA], neurapophysis;
***l.* viscera'lis** [NA] *visceral layer*
***l.* viscera'lis pericar'dii** [NA] *visceral layer of serous pericardium*
***l.* viscera'lis tu'nicae vagina'lis tes'tis** [NA] *visceral layer of tunica vaginalis of testis*
***l.* vit'rea** *l. basalis choroideae*

(FILE 'HOME' ENTERED AT 14:11:00 ON 10 JAN 2001)

FILE 'MEDLINE' ENTERED AT 14:11:05 ON 10 JAN 2001

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L1             1 S VAANDRAGER A/AU
               E VAANDRAGER/AU
L2            32 S E5-E6

FILE 'MEDLINE, EMBASE, BIOSIS, CAPLUS' ENTERED AT 15:02:54 ON 10 JAN 2001
L3             0 S LAMINAPROPIA
L4           150 S LAMINA PROPIA
L5         70959 S BASEMENT MEMBRANE
L6           150 S LAMINA-PROPIA
L7             3 S L5 AND L6
L8             3 DUP REM L7 (0 DUPLICATES REMOVED)
L9       1727264 S COLORECTAL OR GASTROINTESTINAL OR INTEST? OR GASTR?
L10            91 S L9 AND L4
L11        488484 S METASTA?
L12             1 S L11 AND L10
L13         16783 S LAMINA PROPRIA
L14            94 S L13 AND L9 AND L11
L15           490 S (L13 OR L5) AND L9 AND L11
L16           100 S ST RECEPT?
L17           395 S ST# RECEPT?
L18             0 S L17 AND L15
L19          4080 S GCC OR G-CC
L20             0 S L19 AND L15
L21        829362 S PCR OR MRNA OR RIBONUCLEASE
L22            52 S L21 AND L15
L23            25 DUP REM L22 (27 DUPLICATES REMOVED)
L24         24175 S TUMOR MARKER
L25             2 S L24 AND L21 AND (L13 OR L5) AND L11
L26             2 DUP REM L25 (0 DUPLICATES REMOVED)
L27         12399 S L11 AND L21
L28           396 S L27 AND (L13 OR L5)
L29        452287 S IN SITU
L30            77 S L29 AND L28
L31            38 DUP REM L30 (39 DUPLICATES REMOVED)
L32        368996 S MARKER
L33         87067 S L5 OR L13
L34            33 S L33 AND L9 AND L32 AND L21
L35            17 DUP REM L34 (16 DUPLICATES REMOVED)
L36           324 S L32 AND L21 AND L29 AND L9
L37            31 S L36 AND L11
L38            17 DUP REM L37 (14 DUPLICATES REMOVED)
L39            60 S L32 AND L13 AND L29
L40            24 DUP REM L39 (36 DUPLICATES REMOVED)
L41            41 S L40 OR L38
L42            53 S L41 OR L35
L43            51 DUP REM L42 (2 DUPLICATES REMOVED)
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L43 ANSWER 1 OF 51 BIOSIS COPYRIGHT 2001 BIOSIS

ACCESSION NUMBER: 2001:15974 BIOSIS

DOCUMENT NUMBER: PREV200100015974

TITLE: Prognostic value of p53 nuclear accumulation and histopathologic features in T1 transitional cell carcinoma of the urinary bladder.

AUTHOR(S): Shariat, Shahrokh F.; Weizer, Alon Z.; Green, Aaran; Laucirica, Rodolfo; Frolov, Anna; Wheeler, Thomas M.; Lerner, Seth P. (1)

CORPORATE SOURCE: (1) Scott Department of Urology, Baylor College of Medicine, 6560 Fannin Street, Suite 2100, Houston, TX, 77030 USA
SOURCE: Urology, (November, 2000) Vol. 56, No. 5, pp. 735-740. print.
ISSN: 0090-4295.
DOCUMENT TYPE: Article
LANGUAGE: English
SUMMARY LANGUAGE: English
AB Objectives: To determine whether molecular and histopathologic tumor features can predict disease progression in Stage T1 transitional cell carcinoma of the bladder. Methods: Tumor specimens from 43 patients were analyzed with respect to grade, presence of carcinoma in ***situ*** , invasion deep or superficial to the ***lamina*** ***propria*** 's muscularis mucosa, p53 expression using DO-7 and PAb1801 antibodies, age, and sex. Flow cytometry was performed on 30 patients from whom there was adequate paraffin-embedded tissue to assess DNA ploidy. Seven patients underwent immediate cystectomy as primary treatment and 36 patients retained their bladders and were at risk of recurrence and progression. Results: The median follow-up was 79 months. Disease recurred in 17 patients (47.2%) and progressed in 6 (16.7%). Only 3 patients (7.0%) died of bladder cancer. None of the parameters investigated was statistically significant in predicting recurrence, progression, or survival. Only carcinoma in ***situ*** approached statistical significance (P = 0.0593) as a predictor of progression. Early cystectomy did not have a significant effect on cancer-specific survival (P = 0.3603). The concordance rate between the two p53 antibodies was 88% (P <0.0001). Conclusions: Deep invasion of the ***lamina*** ***propria*** , p53 positive immunohistochemistry, high grade, and aneuploidy were not significant adverse prognostic factors for either disease progression or survival. Carcinoma in ***situ*** associated with Stage T1 transitional cell carcinoma may represent a biologically more aggressive cancer requiring early definitive therapy, but this hypothesis should be evaluated in prospective clinical studies.

L43 ANSWER 2 OF 51 MEDLINE
ACCESSION NUMBER: 2000428281 MEDLINE
DOCUMENT NUMBER: 20341387
TITLE: Prostanoids in human colonic mucosa: effects of inflammation on PGE(2) receptor expression.
AUTHOR: Cosme R; Lublin D; Takafuji V; Lynch K; Roche J K
CORPORATE SOURCE: Departments of Internal Medicine and Pharmacology, University of Virginia Health Sciences Center, Charlottesville 22908, USA.
CONTRACT NUMBER: CA68226 (NCI)
SOURCE: HUMAN IMMUNOLOGY, (2000 Jul) 61 (7) 684-96.
Journal code: G9W. ISSN: 0198-8859.
PUB. COUNTRY: United States
Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 200011
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AB Although the tissue concentration of PGE(2) is heightened 3-fold or more during mucosal inflammation, the cellular targets of prostanoids in human mucosa and the resulting changes in cell physiology have not been fully explored. We used a panel of immunoglobulin and ***mRNA*** probes in order to localize and quantitate the four member EP family of prostanoid receptors for binding PGE(2) to cells of histologically normal and inflamed human colonic mucosa, and then examined prostanoid-induced

changes in mucosal lymphocyte function. Prostanoid receptors were selectively expressed on a limited number of human colonic mucosal cells; EP(4) alone was expressed on ***lamina*** ***propria*** mononuclear cells. Dual immunostaining in ***situ*** identified the CD3(+) T lymphocyte as a major EP(4) receptor-bearing cell in normal mucosa. Flow cytometry of isolated cells showed that 19.2% of ***lamina*** ***propria*** mononuclear cells were EP(4)(+), and almost 30% of these were CD3(+). In ***situ*** hybridization with digoxygenin-labeled RNA probes largely confirmed this localization. During inflammation, mucosal T lymphocytes showed a significant enhancement in EP(4) immunoreactive receptor protein. Computer-assisted densitometry of single cells demonstrated an increase in fluorescence intensity from 4.8 +/- 1.8 to 8.6 +/- 1.8 ($p < 0.04$). The effects of PGE(2) included a 35% reduction in T lymphocyte IL-2 secretion. COX 1(+) ***lamina*** ***propria*** cells nearly doubled in number during inflammation; expressed a T lymphocyte ***marker*** ; but retained an unchanged quantity of immunoreactive COX 1 protein per cell. The number of newly appeared COX 2(+) lymphocytes remained <50% that of COX 1(+) cells. A major perturbation in the number and distribution of PGE(2) receptors and enzymes for prostanoid synthesis occurs in chronic inflammation of the colon, with consequences for mucosal T lymphocyte function.

L43 ANSWER 3 OF 51 EMBASE COPYRIGHT 2001 ELSEVIER SCI. B.V.
ACCESSION NUMBER: 2000409284 EMBASE
TITLE: Characterization of the glycoconjugates of boar testis and epididymis.
AUTHOR: Calvo A.; Pastor L.M.; Bonet S.; Pinart E.; Ventura M.
CORPORATE SOURCE: L.M. Pastor, Department of Cellular Biology, Section of Histol./General Embryol., Medical School, Espinardo, 3100 Murcia, Spain
SOURCE: Journal of Reproduction and Fertility, (2000) 120/2 (325-335).
Refs: 70
ISSN: 0022-4251 CODEN: JRPFA4
COUNTRY: United Kingdom
DOCUMENT TYPE: Journal; Article
FILE SEGMENT: 001 Anatomy, Anthropology, Embryology and Histology
021 Developmental Biology and Teratology
LANGUAGE: English
SUMMARY LANGUAGE: English
AB Lectin histochemistry was used to perform in ***situ*** characterization of the glycoconjugates present in boar testis and epididymis. Thirteen horseradish peroxidase- or digoxigenin-labelled lectins were used in samples obtained from healthy fertile boars. The acrosomes of the spermatids were stained intensely by lectins with affinity for galactose and N-acetyl-galactosamine residues, these being soybean, peanut and Ricinus communis agglutinins. Sertoli cells were stained selectively by Maackia ammurensis agglutinin. The ***lamina*** ***propria*** of seminiferous tubules showed the most intense staining with fucose-binding lectins. The Golgi area and the apical part of the principal cells of the epididymis were stained intensely with many lectins and their distribution was similar in the three zones of the epididymis. On the basis of lectin affinity, both testis and epididymis appear to have N- and O-linked glycoconjugates. Spermatozoa from different epididymal regions showed different expression of terminal galactose and N-acetyl-galactosamine. Sialic acid (specifically .alpha.2,3 neuraminic-5

acid) was probably incorporated into spermatozoa along the extratesticular ducts. These findings indicate that the development and maturation of boar spermatozoa are accompanied by changes in glycoconjugates. As some lectins stain cellular or extracellular compartments specifically, these lectins could be useful markers in histopathological evaluation of diseases of boar testis and epididymis.

L43 ANSWER 4 OF 51 BIOSIS COPYRIGHT 2001 BIOSIS
ACCESSION NUMBER: 2000:117297 BIOSIS
DOCUMENT NUMBER: PREV200000117297
TITLE: Detection of circulating ***gastric*** carcinoma-associated antigen MG7-Ag in human sera using an established single determinant immuno-polymerase chain reaction technique.
AUTHOR(S): Ren, Jun; Chen, Zheng; Zhou, Shao Juan; Zhang, Xue Yong; Pan, Bo Rong; Fan, Dai Ming (1)
CORPORATE SOURCE: (1) Chinese PLA Institute of Digestive Diseases, Xijing Hospital, Fourth Military Medical University, 15 Changle West Road, Xi'an, 710032 China
SOURCE: Cancer, (Jan. 15, 2000) Vol. 88, No. 2, pp. 280-285. ISSN: 0008-543X.
DOCUMENT TYPE: Article
LANGUAGE: English
SUMMARY LANGUAGE: English
AB BACKGROUND: In 1994, a novel sensitive method termed immuno-polymerase chain reaction (***PCR***) for the detection of the ***gastric*** carcinoma-associated antigen MG7-Ag in the ***gastric*** carcinoma cell line KATO III was reported. Compared with the enzyme-linked immunoadsorbent assay, the single determinant immuno- ***PCR*** technique could allow for as few as 20 cells to be detected and was found to show an approximately 10,000-fold enhancement in sensitivity of the detection limit. The current study clinically evaluated the significance of serum MG7-Ag detection in ***gastric*** carcinoma patients. METHODS: The sera of patients were immobilized on wells and a specific DNA molecule, which could be amplified by ***PCR*** , was employed as a ***marker*** . The biotinylated monoclonal antibody against ***gastric*** carcinoma was added to bind the antigen immobilized on the wells. After the biotinylated antibody was bound to the antigen, free avidin was used to attach a biotinylated monoclonal antibody and biotinylated DNA molecule. The biotinylated DNA complexed with antigen-antibody-avidin was amplified by ***PCR*** and the ***PCR*** products were analyzed by agarose gel electrophoresis. In the current study this method was used to detect circulating MG7-Ag in the sera of patients with ***gastric*** carcinoma and other various malignancies. For comparison, carcinoembryonic antigem CA 50, CA 19-9, and TAG-72 were quantitated by radioimmunoassay and immunoradiometric assay using the relevant commercial kits in the same sera samples from 86 patients with pathologically confirmed ***gastric*** carcinoma and 83 patients with relevant benign diseases of the stomach. In addition, the semiquantitative analysis of ***PCR*** products among ***gastric*** carcinoma patients with or without ***metastasis*** was performed to compare the intensity of DNA band amplification. RESULTS: Using the immuno-

PCR
assay, positive results were obtained in 164 of 198 patients with ***gastric*** carcinoma (82.8%). The rates of positivity in other malignancies were 17.4% for esophageal carcinoma (15 of 86 patients), 44.4% for colonic carcinoma (40 of 90 patients), 0% for liver carcinoma (none of 84 patients), 2.2% for ovarian carcinoma (1 of 45 patients), 0% for uterine carcinoma (none of 27 patients), and 6.1% for lung carcinoma (4 of 66 patients). The positive results obtained from those patients with
benign diseases were: 7.7% for peptic ulcer (6 of 78 patients), 5.9% for chronic ***gastritis*** (7 of 118 patients), 3.3% for chronic colitis (2 of 60 patients), and 0.8% for healthy blood donors (2 of 236 patients).
In addition, the semiquantitative analysis of ***PCR*** products showed that the intensity of DNA band amplified from the ***PCR*** products of those patients with ***metastasis*** was much higher than that of patients without ***metastasis*** or those with early stage tumors (1.94 +- 0.03 vs. 1.28 +- 0.02). In comparative studies of immuno-***PCR*** and commercial assays for tumor-associated antigens the sensitivity of immuno- ***PCR*** was 81.4% and pseudopositivity was lower (8.4% vs. 7.2-12.0% with radioimmunoassay or immunoradiometric assay). CONCLUSIONS: The results of the current study demonstrate that introducing ***PCR*** into the indirect determination of tumor-associated antigen in the serum can improve the sensitivity of detection greatly. This novel assay also might be used to monitor the circulating amount of tumor-associated antigen after ***gastrectomy*** and provide information regarding recurrence or ***metastasis*** , as well as for screening elderly patients who have no indications for endoscopy and those with precancerous conditions. The application of immuno- ***PCR*** in the serologic diagnosis of carcinoma has significant advantages including ready application in the clinical setting
as well as use as a potential screening tool in mass surveys of high risk populations with ***gastric*** carcinoma.

L43 ANSWER 5 OF 51 EMBASE COPYRIGHT 2001 ELSEVIER SCI. B.V.
ACCESSION NUMBER: 2000361411 EMBASE
TITLE: P2X2 receptor expression by interstitial cells of Cajal in vas deferens implicated in semen emission.
AUTHOR: Burton L.D.; Housley G.D.; Salih S.G.; Jarlebark L.; Christie D.L.; Greenwood D.
CORPORATE SOURCE: G.D. Housley, Molecular Physiology Laboratory, Department of Physiology, University of Auckland, Private Bag 92019, Auckland, New Zealand. g.housley@auckland.ac.nz
SOURCE: Autonomic Neuroscience: Basic and Clinical, (1 Nov 2000) 84/3 (147-161).
Refs: 66
ISSN: 1566-0702 CODEN: ANUEB2
PUBLISHER IDENT.: S 1566-0702(00)00200-9
COUNTRY: Netherlands
DOCUMENT TYPE: Journal; Article
FILE SEGMENT: 002 Physiology
021 Developmental Biology and Teratology
028 Urology and Nephrology
LANGUAGE: English
SUMMARY LANGUAGE: English
AB Male reproduction is dependent upon seminal emission mediated by vas deferens contraction. This drives spermatic fluid to the prostatic urethra
during ejaculation. We localize interstitial cells of Cajal (ICC), which

express P2X2 receptor, subunits of ATP-gated ion channels, to rat, mouse and guinea-pig vas deferens submucosa. Reverse transcription-polymerase chain reaction (RT-PCR) analysis of rat vas deferens resolved two functional splice variant transcripts of the P2X2 receptor subunit. The P2X2 receptor mRNA was localized principally within the ***lamina*** ***propria*** (submucosal) region of the rat vas deferens using in ***situ*** hybridization (ISH) and in ***situ*** RT-PCR- ISH. Immunohistochemistry using rat, mouse and guinea-pig vas deferens tissues confirmed expression of P2X2 receptor protein within the ***lamina*** ***propria*** , particularly within a dense column of small spindle-shaped cells adjacent to the columnar epithelial cells which line the lumen. This immunoreactivity was co-localized with neurone-specific enolase (NSE) and c- Kit protein expression, gene markers for ICC. Mucosal mast cells were distinguished from ICC by toluidine blue staining. Choline acetyltransferase immunoreactivity, a ***marker*** for post-ganglionic parasympathetic innervation, occurred on the lateral margin of the ***lamina*** ***propria*** and extended into the inner longitudinal muscle layer. P2X1 receptor immunolabelling was associated with sympathetic innervation of the smooth muscle in the outer longitudinal and circular muscle layers, but not the inner longitudinal layer. The physiological significance of the vas deferens ICC which express P2X2 receptors remains to be established. Possible roles include regulation of smooth muscle activity or mucosal secretion utilizing local ATP signaling, both of which would affect semen transport. (C) 2000 Elsevier Science B.V.

L43 ANSWER 6 OF 51 EMBASE COPYRIGHT 2001 ELSEVIER SCI. B.V.

ACCESSION NUMBER: 2000362046 EMBASE

TITLE: Roles of chloroform-resistant variants in mouse models of experimental colitis.

AUTHOR: Matsumoto S.; Watanabe N.; Umesaki Y.

CORPORATE SOURCE: S. Matsumoto, Yakult Ctrl. Inst. Microbiol. Res., Yaho 1986, Kunitachi, Tokyo 186-8650, Japan. satoshi-matsumoto@yakult.co.jp

SOURCE: Microbial Ecology in Health and Disease, (2000) 12/2 (102-108).
Refs: 30
ISSN: 0891-060X CODEN: MEHDE6

COUNTRY: Norway

DOCUMENT TYPE: Journal; Article

FILE SEGMENT: 004 Microbiology
037 Drug Literature Index
048 Gastroenterology

LANGUAGE: English

SUMMARY LANGUAGE: English

AB We have recently reported that the ***intestinal*** microflora, especially chloroform-resistant variants (CRV), plays an important role in the maturation of murine ***intestinal*** mucosal T cell developments.
In this study, to elucidate the role of CRV in the development of colitis, we compared the susceptibility to the colitis of the specific-pathogen-free (SPF) flora-associated and CRV-associated ex-GF Balb/c mice by means

of intra-rectal administration of 2,4,6-trinitrobenzene sulfonic acid (TNBS). The association of SPF flora or CRV with GF Balb/c induced phenotypic maturation in large ***intestinal*** (LI)-***intestinal*** intraepithelial lymphocytes (IELs) and LI-***lamina*** ***propria*** (LP) T cells. In LI-IELs, the CD4/CD8 ratio decreased with contamination by SPF flora or CRV with GF Balb/c mice. Among LP cells, the number of .alpha..beta. T cell receptor (TCR) T cells increased. The percentage of the CD4+ CD45RB(high) phenotype in CD4+ .alpha..beta. TCR LI-LP T cells, which is a critical ***marker*** molecule of virgin T cells, decreased in both SPF flora and CRV-associated Balb/c mice compared to GF Balb/c mice. These results suggested that the CRV flora converted the LI-IEL and LI-LP T cell characteristics from the GF to the conventional type. After the induction of colitis by means of an intra-rectal enema of TNBS in 50% ethanol, the body weight decreased in the group of Balb/c mice contaminated with the fecal flora of SPF mice but not that of CRV flora mice. Moreover, the colo-rectal tissue weight increased in the SPF flora-associated Balb/c mice but not in CRV-associated ones. Flow-cytometric analysis indicated that the percentage of LI-LP .alpha..beta. TCR T cells increased in both the SPF flora and CRV-associated Balb/c mice. However, CD4+ CD45RB(high) LI-LP .alpha..beta. TCR T cells only decreased in the SPF flora-associated Balb/c mice. Semi-quantitative RT- ***PCR*** analysis indicated that ***mRNA*** in both IL-12 and IFN-.gamma. in LI-LP cells was higher in SPF flora-associated Balb/c mice than in CRV-associated ones. Taken together, these results suggested that the CRV flora is important of the maturation for LI-IELs and LI-LP T cells from GF to the conventional type. However, this flora is not critical for the development of colitis.

L43 ANSWER 7 OF 51 MEDLINE

ACCESSION NUMBER: 2000005743 MEDLINE
DOCUMENT NUMBER: 20005743
TITLE: Characterization of cytokeratin 20 expression in pancreatic and ***colorectal*** cancer.
AUTHOR: Wildi S; Kleeff J; Maruyama H; Maurer C A; Friess H; Buchler M W; Lander A D; Korc M
CORPORATE SOURCE: Department of Medicine, University of California, Irvine 92697, USA.
CONTRACT NUMBER: CA-40162 (NCI)
SOURCE: CLINICAL CANCER RESEARCH, (1999 Oct) 5 (10) 2840-7. Journal code: C2H. ISSN: 1078-0432.
PUB. COUNTRY: United States
Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 200001
ENTRY WEEK: 20000104

AB Cytokeratin 20 belongs to the epithelial subgroup of the intermediate filament family. Because of its restricted range of expression in humans, it has become an important tool for detecting and identifying ***metastatic*** cancer cells by immunohistochemistry and by ***PCR*** analysis. Despite its widespread diagnostic use in ***colorectal*** cancer and occasional use in pancreatic cancer, little is known about the expression of CK 20 in these tumors in vivo. Therefore, in the present

study we characterized CK 20 expression in pancreatic and ***colorectal*** cancer by comparison with its expression in the normal pancreas and colon. Tissue samples from 24 patients with pancreatic cancer and from 41 patients with ***colorectal*** cancer were examined for CK 20 expression by Northern blot analysis, immunohistochemistry, and in ***situ*** hybridization. CK 20 expression was observed in the cancer cells of both cancer types. A subgroup of the pancreatic cancers exhibited a 3.2-fold increase in CK 20 ***mRNA*** by comparison with respective normal controls. In contrast, colon cancers underexpressed CK 20 ***mRNA*** by comparison with the respective controls. In the normal tissues, CK 20 immunoreactivity was relatively faint and sparse in the pancreatic ductal cells but intense and abundant in the apical portions of the colonic mucosa. CK 20 immunoreactivity was also evident in the ductal cells from the chronic pancreatitis-like lesions adjacent to the cancer cells. Furthermore, distant ***metastases*** from pancreas carcinomas exhibited strong CK 20 immunoreactivity. It is concluded that CK 20 is overexpressed in pancreatic cancer and that it can serve as an excellent ***marker*** for ***metastatic*** pancreatic cancer.

L43 ANSWER 8 OF 51 CAPLUS COPYRIGHT 2001 ACS
ACCESSION NUMBER: 2000:54482 CAPLUS
DOCUMENT NUMBER: 132:320333
TITLE: Deficiency of a novel retinoblastoma binding protein 2-homolog is a consistent feature of sporadic human melanoma skin cancer
AUTHOR(S): Vogt, Thomas; Kroiss, Max; McClelland, Michael; Gruss, Claus; Becker, Bernd; Bosserhoff, Anja Katrin; Rumpler, Gerhard; Bogenrieder, Thomas; Landthaler, Michael; Stolz, Wilhelm
CORPORATE SOURCE: Department of Dermatology, University of Regensburg, Regensburg, D-93042, Germany
SOURCE: Lab. Invest. (1999), 79(12), 1615-1627
CODEN: LAINAW; ISSN: 0023-6837
PUBLISHER: Lippincott Williams & Wilkins
DOCUMENT TYPE: Journal
LANGUAGE: English
AB Using RNA arbitrarily primed ***PCR*** , the authors selected for transcripts with cell cycle-related differential expression in cultured human melanocytes. Among the partial cDNAs cloned, a novel cDNA was identified, which showed 54% identity to the recently cloned cDNA of the retinoblastoma-binding protein-2 (RBP2). The 6.5-kB full-length cDNA of this RBP2-related gene, termed RBP2 homolog 1 (RBP2-H1), was obtained from a human teratocarcinoma cDNA library. Two independent libraries from human malignant melanomas were neg. A computerized sequence anal. revealed highly conserved motifs with possible functional meaning: two domains that, in the RBP2 homolog, mediate the binding and interaction with the proteins encoded by the retinoblastoma susceptibility gene, the TATA-binding protein and the oncoprotein rhombotin 2; in addn., two DNA-binding zinc finger/leukemia-assocd. protein motifs were detected. Because a functional role in cell-cycle control and transcriptional activation can be envisioned, the expression of this novel transcript in normal fetal and adult tissues and tissues of benign and malignant melanocytic tumors was investigated. Multiple Northern blot, RT-

PCR , and in ***situ*** hybridization analyses showed that the corresponding ***mRNA*** is expressed in virtually all normal tissues.

Accordingly, RBP2-H1 expression was found in microdissected tissue samples from benign melanocytic nevi. In contrast, the transcript was down-regulated or even lost in tissue samples from human malignant melanomas, melanoma ***metastases*** , and melanoma cell lines. Thus, the loss or down-regulation of RBP2-H1 expression could be a useful mol. ***marker*** for a transformed phenotype in the human melanocytic system.

REFERENCE COUNT: 41

REFERENCE(S):
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(2) Chin, L; Genes Dev 1998, V12, P3467 CAPLUS
(3) Chou, P; Adv Enzymol Relat Areas Mol Biol 1978, V47, P45 CAPLUS
(4) Defeo-Jones, D; Nature 1991, V352, P251 CAPLUS
(5) Devary, Y; Cell 1992, V71, P1081 CAPLUS
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L43 ANSWER 9 OF 51 MEDLINE
ACCESSION NUMBER: 1999194205 MEDLINE
DOCUMENT NUMBER: 99194205
TITLE: Determination of high mobility group I(Y) expression level in ***colorectal*** neoplasias: a potential diagnostic ***marker*** .
AUTHOR: Abe N; Watanabe T; Sugiyama M; Uchimura H; Chiappetta G; Fusco A; Atomi Y
CORPORATE SOURCE: First Department of Surgery, Kyorin University School of Medicine, Mitaka City, Tokyo, Japan.
SOURCE: CANCER RESEARCH, (1999 Mar 15) 59 (6) 1169-74.
Journal code: CNF. ISSN: 0008-5472.
PUB. COUNTRY: United States
Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals; Cancer Journals
ENTRY MONTH: 199906
ENTRY WEEK: 19990603

AB High mobility group I(Y) [HMGI(Y)] proteins are architectural factors abundantly expressed during embryogenesis, and their overexpression is known to be closely associated with neoplastic transformation of cells. This study was performed to investigate whether determination of HMGI(Y) expression level could assist in (a) differential diagnosis between ***colorectal*** carcinoma, adenoma, and normal tissue and (b) determination of the prognosis of patients with ***colorectal*** cancer. To this end, HMGI(Y) expression was determined at both the protein and ***mRNA*** levels in 30 ***colorectal*** carcinomas, 26 adenomas, and 23 normal mucosa samples, and further correlations between the protein expression levels and various clinicopathological parameters, such as depth of tumor invasion, lymphatic and/or venous involvement, regional lymph node ***metastasis*** , and Dukes' stage, were determined in 30 carcinoma cases. The expression of HMGI(Y) proteins was significantly increased in carcinoma and adenoma with severe atypia compared with that in adenoma with less atypia and normal ***colorectal*** mucosa. This increase in HMGI(Y) protein expression was found to be because of an increase in its ***mRNA*** expression by

RNA
in ***situ*** hybridization analysis. Clinicopathological analysis revealed that the level of HMGI(Y) protein expression was significantly correlated with parameters known to be indicative of a poor prognosis in ***colorectal*** cancer patients. These findings indicate that the determination of the HMGI(Y) protein expression level could be a potential ***marker*** for the diagnosis of ***colorectal*** neoplasias and can be of great value in predicting the prognosis of patients with ***colorectal*** cancer.

L43 ANSWER 10 OF 51 BIOSIS COPYRIGHT 2001 BIOSIS
ACCESSION NUMBER: 1999:331305 BIOSIS
DOCUMENT NUMBER: PREV199900331305
TITLE: Increase in intraepithelial and ***lamina*** ***propria*** CD8 lymphocytes during a 3 month follow up study of campylobacter enteritis.
AUTHOR(S): Jenkins, David A. (1); Thornley, Jon P. (1); Neal, Keith P. (1); Wright, Trina (1); Knox, Katherine (1); Spiller, Robin C. (1)
CORPORATE SOURCE: (1) Univ Hosp, Nottingham UK
SOURCE: Gastroenterology, (April, 1999) Vol. 116, No. 4 PART 2, pp. A892-A893.
Meeting Info.: Digestive Disease Week and the 100th Annual Meeting of the American Gastroenterological Association Orlando, Florida, USA May 16-19, 1999 American Gastroenterological Association
. ISSN: 0016-5085.
DOCUMENT TYPE: Conference
LANGUAGE: English

L43 ANSWER 11 OF 51 MEDLINE
ACCESSION NUMBER: 1999446805 MEDLINE
DOCUMENT NUMBER: 99446805
TITLE: In ***situ*** expression of E-selectin and intercellular adhesion molecule-1 in chronic inflammatory diseases of the gastrointestinal tract.
AUTHOR: Lazaris A C; Dicoglou C; Tseleni-Balafouta S; Paraskevakou H; Davaris P S
CORPORATE SOURCE: Department of Pathology, Athens National University Medical School, Greece.
SOURCE: APMIS, (1999 Sep) 107 (9) 819-27.
Journal code: AMS. ISSN: 0903-4641.
PUB. COUNTRY: Denmark
Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals; Cancer Journals
ENTRY MONTH: 200001
ENTRY WEEK: 20000104
AB AIM: The study of cell adhesion molecules contributes to our understanding of the inflammatory mechanisms which include the endothelial activation of newly formed or pre-existing vessels, the increase of inflammatory cells' adhesive capability and their migration into perivascular tissues. The aim

of the present study was to investigate the local presence and the extent of expression of E-selectin and intercellular adhesion molecule-1 (ICAM-1) in the mucosa of patients with chronic gastritis, chronic inflammatory bowel disease, and controls, as well as to identify possible correlations between in ***situ*** expression of the above adhesion molecules and degree of inflammatory activity or therapeutic response. DESIGN: In cryostat tissue sections we examined the immunohistochemical expression and localization of E-selectin and the intercellular adhesion molecule-1 (ICAM-1). Our specimens consisted of 27 cases of chronic gastritis, 42 cases of ulcerative colitis, and 15 cases of Crohn's disease. RESULTS: E-selectin was expressed in capillary endothelia as well as on neutrophils, located either in the ***lamina*** ***propria*** or in the glandular epithelia or lumina. This ***marker*** 's expression was associated with the active phase of ulcerative colitis ($p<0.0005$) and possibly of chronic gastritis ($p=0.06$). ICAM-1 immunolabelling was localized in endothelia and chronic inflammatory components which had passed through the vascular walls. This ***marker*** 's immunoreactivity was generally increased in all our specimens compared to normal mucosa and generally tended to correlate with chronic phases of the inflammatory process ($p<0.10$). CONCLUSIONS: E-selectin regulates the accumulation of neutrophils in the early stages of the inflammatory process and is thus associated at least with the active phase of ulcerative colitis. Whether any post-therapy alteration of E-selectin immunopositivity seems to indicate a good response to drug therapy is well worth investigating in ulcerative colitis patients. ICAM-1 immunoreactivity in lymphoplasmacytic infiltrates might serve as a ***marker*** of chronic immune stimulation, which is potentially responsible for the persistence of the inflammatory disorders.

L43 ANSWER 12 OF 51 BIOSIS COPYRIGHT 2001 BIOSIS
ACCESSION NUMBER: 1999:293220 BIOSIS
DOCUMENT NUMBER: PREV199900293220
TITLE: Selective distribution of calretinin in adenocarcinomas of the human colon and adjacent tissues.
AUTHOR(S): Gotzos, Vassilis (1); Wintergerst, Eva S.; Musy, Jean P.; Spichtin, Hans P.; Genton, Claude Y.
CORPORATE SOURCE: (1) Institute of Histology and General Embryology, University Perolles, CH-1705, Fribourg Switzerland
SOURCE: American Journal of Surgical Pathology, (June, 1999) Vol. 23, No. 6, pp. 701-711.
ISSN: 0147-5185.
DOCUMENT TYPE: Article
LANGUAGE: English
SUMMARY LANGUAGE: English
AB The expression of calretinin, a calcium-binding protein, has been studied in a series of 82 human ***colorectal*** adenocarcinomas. In 22.5% of the cases, part of the tumor cells were calretinin-positive, whereas the cells of the normal and paratumoral mucosa were always negative. Two types of cells from the tumoral mass reacted positively and selectively with calretinin-antisera: the tumor cells and giant fibroblasts. The neurons of enteric ganglia and reactive mesothelial cells also reacted positively to the same antibody. The results obtained by immunochemistry have been confirmed by Western blot analysis and in ***situ*** hybridization for calretinin ***mRNA*** . There is a correlation between the expression

of calretinin and the degree of differentiation of the tumor. Well-differentiated tumors express calretinin in only 5% of the cases, whereas this percentage is 20% for moderately differentiated tumors and 66.6% for poorly differentiated or undifferentiated tumors. We conclude that calretinin is expressed by most undifferentiated ***colorectal*** adenocarcinomas, but only by a limited number of cells in well-differentiated tumors. The degree of its expression coincides also with additional signs of malignancy, such as an increase in the number of ***metastases*** in the regional lymph nodes and in other organs.

L43 ANSWER 13 OF 51 MEDLINE
ACCESSION NUMBER: 1999396073 MEDLINE
DOCUMENT NUMBER: 99396073
TITLE: Differing patterns of transforming growth factor-beta expression in normal ***intestinal*** mucosa and in active celiac disease.
AUTHOR: Lionetti P; Pazzaglia A; Moriondo M; Azzari C; Resti M; Amorosi A; Vierucci A
CORPORATE SOURCE: Department of Pediatrics, University of Florence, Italy.
SOURCE: JOURNAL OF PEDIATRIC GASTROENTEROLOGY AND NUTRITION, (1999 Sep) 29 (3) 308-13.
Journal code: JL6. ISSN: 0277-2116.
PUB. COUNTRY: United States
Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 199912
ENTRY WEEK: 19991202

AB BACKGROUND: Growth-inhibitory autocrine polypeptides such as transforming growth factor (TGF)-beta may play a role in the control of normal epithelial cell proliferation and differentiation. In addition, TGF-beta has a central role in extracellular matrix homeostasis and regulates the immune response at the local level. In this study immunohistochemistry was used to examine the pattern of TGF-beta protein distribution and quantitative reverse transcription-polymerase chain reaction (RT-***PCR***) to determine levels of TGF-beta messenger RNA expression in normal ***intestinal*** mucosa and in the flat mucosa of children with celiac disease. METHODS: Small ***intestinal*** biopsies were performed in children with active celiac disease and in histologically normal control subjects. Frozen sections were single stained using an anti-TGF-beta monoclonal antibody and were double stained for TGF-beta and T cell, macrophages, and the activation ***marker*** CD25. Total RNA was extracted from frozen specimens and competitive quantitative RT-***PCR*** performed for TGF-beta ***mRNA*** using internal synthetic standard RNA. RESULTS: In normal ***intestinal*** mucosa, by immunohistochemistry, TGF-beta expression was most prominent in the villous tip epithelium, whereas in the ***lamina*** ***propria*** , weak immunoreactivity was present. The celiac mucosa showed weak and patchy epithelial TGF-beta immunoreactivity. In contrast, an intense staining positivity was present in the ***lamina*** ***propria*** localized mostly in the subepithelial region where T cells, macrophages, and CD25+ cells were detected by double staining. By quantitative RT-***PCR*** , levels of TGF-beta ***mRNA*** transcripts appeared to be

increased in celiac ***intestinal*** mucosa compared with that in control subjects, although the difference did not reach statistical significance. CONCLUSIONS: These observations suggest that TGF-beta expression is associated with differentiated enterocyte function. In celiac disease the lower TGF-beta epithelial cell expression could be a consequence of the preponderance of a less differentiated epithelial cell phenotype also present in the surface epithelium. In contrast, the prominent TGF-beta positivity of the subepithelial ***lamina*** ***propria*** suggests an association with the local immune and inflammatory response, as well as a potential role of these peptides in mesenchymal-epithelial cell interaction.

L43 ANSWER 14 OF 51 EMBASE COPYRIGHT 2001 ELSEVIER SCI. B.V.
ACCESSION NUMBER: 1999215721 EMBASE
TITLE: Mucosal cytokine expression, cellular markers and adhesion molecules in inflammatory bowel disease.
AUTHOR: Woywodt A.; Ludwig D.; Neustock P.; Kruse A.; Schwarting K.; Jantschek G.; Kirchner H.; Stange E.F.
CORPORATE SOURCE: Dr. E.F. Stange, Division of Gastroenterology, Department of Medicine 1, University of Lubeck, Ratzeburger Allee 160,
23538 Lubeck, Germany
SOURCE: European Journal of Gastroenterology and Hepatology, (1999)
11/3 (267-276).
Refs: 35
ISSN: 0954-691X CODEN: EJGHES
COUNTRY: United Kingdom
DOCUMENT TYPE: Journal; Article
FILE SEGMENT: 005 General Pathology and Pathological Anatomy
026 Immunology, Serology and Transplantation
048 Gastroenterology
LANGUAGE: English
SUMMARY LANGUAGE: English
AB Objective. To relate proinflammatory cytokines to leukocyte surface markers and adhesion molecules in the same paraffin-embedded biopsy specimen in inflammatory bowel disease (IBD) of varying activity. Methods.
Biopsies of seven cases of Crohn's disease, seven patients with ulcerative
colitis, one case of ***intestinal*** infection and six control subjects were studied. We performed in ***situ*** hybridization on sections of tissue using probes specific to interleukin-1.beta. (IL-1.beta.), interleukin-6 (IL-6) and tumour necrosis factor-.alpha. (TNF.alpha.). Leucocyte markers and adhesion molecules were investigated in subsequent slides of selected specimens by immunohistochemistry. Results. Cytokine ***mRNA*** was found in large numbers of cells throughout the inflamed ***intestine*** but also in some macroscopically unaffected tissue specimens. Transcripts were predominantly located within the ***lamina*** ***propria*** where immunohistochemistry of parallel sections revealed numerous macrophages and the presence of endothelial adhesion molecules. The expression of the different cytokines was closely related to each other and to histological but not to macroscopic (endoscopic) activity. Conclusions. The synthesis of IL-1.beta., IL-6 and TNF.alpha. ***mRNA*** is coordinately regulated. Cytokine production is located mostly in the ***lamina*** ***propria*** at sites that are rich in macrophages and show abundant staining of vascular adhesion molecules. This cascade of immune events is related to inflammatory cell infiltration in both Crohn's disease and ulcerative colitis.

L43 ANSWER 15 OF 51 MEDLINE
ACCESSION NUMBER: 1999297748 MEDLINE
DOCUMENT NUMBER: 99297748
TITLE: Expression of cell cycle markers in ***colorectal*** carcinoma: superiority of cyclin A as an indicator of poor prognosis.
AUTHOR: Handa K; Yamakawa M; Takeda H; Kimura S; Takahashi T
CORPORATE SOURCE: Second Department of Internal Medicine, Yamagata University
School of Medicine, Japan.. khanda@med.id.yamagata-u.ac.jp
SOURCE: INTERNATIONAL JOURNAL OF CANCER, (1999 Jun 21) 84 (3) 225-33.
Journal code: GQU. ISSN: 0020-7136.
PUB. COUNTRY: United States
Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals; Cancer Journals
ENTRY MONTH: 199908
ENTRY WEEK: 19990804
AB Our aim was to analyze the relationship between the proliferative activity of cancer cells, assessed using some cell cycle markers, and clinicopathological factors in ***colorectal*** carcinoma patients. Immunostaining for Ki-67 (pan-cell cycle ***marker***), cyclin D1 (G1-phase ***marker***) and cyclin A (S- to G2-phase ***marker***), and in ***situ*** hybridization for histone H3 ***mRNA*** (S-phase ***marker***) were carried out. Immunoreactivity was evaluated semiquantitatively using a scoring system to calculate a staining index (SI). The expression of cyclin D1, histone H3 ***mRNA*** and cyclin A correlated significantly with Ki-67 antigen expression. The SIs of Ki-67, cyclin A and histone H3 ***mRNA*** were significantly higher in patients > or = 65 years of age than in those < 65. The SIs of Ki-67 and cyclin D1 in poorly differentiated adenocarcinomas were significantly higher than in the other tumor types. Furthermore, the SI of cyclin D1 in carcinomas with lymph node ***metastasis*** was higher than in carcinomas without ***metastasis*** and was higher in advanced carcinomas than early carcinomas. The overall survival was significantly lower in patients with cyclin A overexpression than in those without. Multivariate analysis indicated that cyclin A overexpression is an independent prognostic factor in patients with ***colorectal*** adenocarcinoma. Our results indicate that cyclin D1 overexpression correlates with poor adenocarcinoma differentiation and tumor progression, and cyclin A overexpression is a superior indicator of poor prognosis compared with the other cell cycle markers tested.

L43 ANSWER 16 OF 51 BIOSIS COPYRIGHT 2001 BIOSIS
ACCESSION NUMBER: 1999:501339 BIOSIS
DOCUMENT NUMBER: PREV199900501339
TITLE: In ***situ*** demonstration of parathyroid hormone-related protein ***mRNA*** in sclerosing hepatic carcinoma.
AUTHOR(S): Kitazawa, Riko (1); Kitazawa, Sohei; Yoon, Seitetsu; Kasuga, Masato; Maeda, Sakan
CORPORATE SOURCE: (1) Second Department of Pathology, Kobe University School of Medicine, 7-5-1, Kusunoki-cho, Chuo-ku, Kobe, 650-0017 Japan

SOURCE: Virchows Archiv, (Aug., 1999) Vol. 435, No. 2, pp. 137-142.
ISSN: 0945-6317.
DOCUMENT TYPE: Article
LANGUAGE: English
SUMMARY LANGUAGE: English
AB A 69-year-old man had a hepatic tumour occupying the left and half of the right lobe, with portal vein thrombus. There were hypercalcaemia and hypophosphataemia with increased nephrogenous cyclic adenosine monophosphate; bone ***metastases*** were excluded. Serum parathyroid hormone-related protein (PTHrP) was elevated, but no increase in intact parathyroid hormone (PTH) or vitamin D3 metabolites was found. At autopsy the histological features were typical of sclerosing hepatic carcinoma. By immunohistochemistry PTHrP was detected in cancer cell nests but not in the fibrous stroma. PTHrP transcripts were demonstrated by in ***situ*** hybridization using a polymerase chain reaction (***PCR***)-derived single-stranded DNA probe. Tumour cells expressed AE1 and CA19-9 (markers for cholangioepithelium) and CEA (for bile canaliculi). Electron microscopy revealed microvilli on the apical surface, and secretory granules 100 nm in diameter were observed. These findings indicate that this case is one of cholangiocellular sclerosing hepatic carcinoma. The interaction between cancer and stromal cells may be the cause of PTHrP overexpression.

L43 ANSWER 17 OF 51 CAPLUS COPYRIGHT 2001 ACS
ACCESSION NUMBER: 1999:746620 CAPLUS
DOCUMENT NUMBER: 132:135698
TITLE: Napsin A, a member of the aspartic protease family, is abundantly expressed in normal lung and kidney tissue and is expressed in lung adenocarcinomas
AUTHOR(S): Chuman, Y.; Bergman, A.-C.; Ueno, T.; Saito, S.; Sakaguchi, K.; Alaiya, A. A.; Franzen, B.; Bergman, T.; Arnott, D.; Auer, G.; Appella, E.; Jornvall, H.; Linder, S.
CORPORATE SOURCE: National Cancer Institute, Laboratory of Cell Biology, National Institutes of Health, Bethesda, MD, USA
SOURCE: FEBS Lett. (1999), 462(1,2), 129-134
CODEN: FEBLAL; ISSN: 0014-5793
PUBLISHER: Elsevier Science B.V.
DOCUMENT TYPE: Journal
LANGUAGE: English
AB A pair of 35 kDa polypeptides (TAO1/TAO2) are expressed in more than 90% of all primary lung adenocarcinomas but not in other major malignancies. Mass spectrometry of tryptic peptides showed that TAO1/TAO2 is identical to napsin A, a recently described member of the aspartic proteinase family. The site of processing of pronapsin A to the mature form was located. Napsin expression was detected in human lung adenocarcinoma tumors, compatible with the ***marker*** nature of TAO1/TAO2 in the diagnosis of primary lung adenocarcinoma. This is important since identification of markers which can distinguish primary lung adenocarcinomas from distant ***metastases*** is desirable. Northern blot anal. showed expression of napsin also in normal lung and kidney tissue, and in ***situ*** hybridization showed expression in type II alveolar cells of the lung. This protease is concluded to have a specific functional role in the normal alveolar epithelium and is a candidate

protease for the proteolytic processing of surfactant precursors.
REFERENCE COUNT: 16
REFERENCE(S): (1) Arnott, D; Anal Biochem 1998, V258, P1 CAPLUS
(3) Daher, R; Clin Chem Lab Med 1998, V36, P671 CAPLUS
(5) Hirano, T; Br J Cancer 1995, V72, P840 CAPLUS
(6) Hirano, T; Br J Cancer 1997, V75, P978 CAPLUS
(7) Holzinger, A; Hybridoma 1996, V15, P49 CAPLUS
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L43 ANSWER 18 OF 51 MEDLINE
ACCESSION NUMBER: 1999133665 MEDLINE
DOCUMENT NUMBER: 99133665
TITLE: Human immunodeficiency virus-rich multinucleated giant cells in the colon: a case report with transmission electron microscopy, immunohistochemistry, and in ***situ*** hybridization.
AUTHOR: Lewin-Smith M; Wahl S M; Orenstein J M
CORPORATE SOURCE: Armed Forces Institute of Pathology, Washington, DC, USA.
CONTRACT NUMBER: NO1-DE-12585 (NIDCR)
SOURCE: MODERN PATHOLOGY, (1999 Jan) 12 (1) 75-81.
Journal code: PTH. ISSN: 0893-3952.
PUB. COUNTRY: United States
Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 199906
AB Multinucleated giant cells (MNGCs) expressing the human immunodeficiency virus (HIV) are characteristically found in hyperplastic tonsils and adenoids, acquired immunodeficiency syndrome encephalitis, vacuolar myelopathy, and lymph nodes coinfected with opportunistic pathogens. We identified similar polykaryons in the hyperplastic gut-associated immune system of an HIV-infected patient. Colonic biopsy specimens from this patient with heme-positive stools were studied by light and transmission electron microscopy (TEM), immunohistochemistry, and in ***situ*** hybridization for HIV-specific RNA. No bleeding source was identified by endoscopic or light microscopic examination of the biopsied tissues. There was diffuse and nodular lymphoid hyperplasia with germinal centers. HIV RNA-positive and p24 gag-positive Langhans'-type MNGCs and mononuclear cells (MNCs) were present within the ***lamina*** ***propria*** The MNGCs and MNCs were identified as macrophages on the basis of TEM and expression of CD68, HAM56, and lysozyme markers. They also expressed S100 protein, a ***marker*** of dendritic/Langerhans' cells, but they lacked Birbeck granules by TEM. In ***situ*** hybridization demonstrated RNA expression by MNGCs, MNCs, and follicular dendritic cells. TEM revealed budding and mature HIV particles on the plasma membranes of MNGCs, MNCs, and follicular dendritic cells. We conclude, therefore, that hyperplastic gut-associated immune systems can contain HIV-positive MNGCs and MNCs of the type seen in tonsils and adenoids and opportunistic pathogen-infected lymph nodes. Associated with immune activation, macrophages can express markers of dendritic/Langerhans' cells, cell types derived from the same CD34-positive bone marrow progenitor.

L43 ANSWER 19 OF 51 MEDLINE
ACCESSION NUMBER: 1998391032 MEDLINE
DOCUMENT NUMBER: 98391032
TITLE: Substance P (neurokinin-1) receptor is a ***marker*** of human mucosal but not peripheral mononuclear cells:

molecular quantitation and localization.
AUTHOR: Goode T; O'Connell J; Sternini C; Anton P; Wong H; O'Sullivan G C; Collins J K; Shanahan F
CORPORATE SOURCE: Department of Medicine, National University of Ireland, Cork.
SOURCE: JOURNAL OF IMMUNOLOGY, (1998 Sep 1) 161 (5) 2232-40. Journal code: IFB. ISSN: 0022-1767.
PUB. COUNTRY: United States
Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Abridged Index Medicus Journals; Priority Journals; Cancer Journals
ENTRY MONTH: 199811
ENTRY WEEK: 19981102
AB Reciprocal communication between the immune system and the neuroendocrine system is mediated via a common chemical language of shared ligands and receptors. The neuropeptide substance P (SP) has been implicated as a mediator of immunomodulation. The evidence for substance P receptors on human lymphocytes is, however, controversial. The aims of the present study are to investigate substance P receptor (SPR) expression in human peripheral and mucosal mononuclear cells and to identify cellular sites of expression in human colonic mucosa. Using reverse-transcriptase ***PCR*** , we demonstrate that PBMC isolations are negative for SPR ***mRNA*** expression, whereas ***lamina*** ***propria*** mononuclear cell (LPMC) isolations express on average eight SPR ***mRNA*** transcripts per cell. In ***situ*** hybridization performed on surgically resected colonic tissue confirms the expression of SPR ***mRNA*** in LPMC in vivo. SPR ***mRNA*** signal was detected in LPMC, lymphoid follicles, and epithelium. The complementary technique of immunohistochemistry gave a similar distribution of SPR expression that colocalized with CD45 immunoreactivity. Dual-fluorochrome flow cytometry revealed SPR expression by CD4, CD45RO, CD45RA, CD8, CD19, and CD14 LPMC subsets, but not PBMC. Our findings suggest that SPR expression is distinctive of human colonic mucosal mononuclear cells and support a direct role for SP in mucosal immunomodulation.

L43 ANSWER 20 OF 51 EMBASE COPYRIGHT 2001 ELSEVIER SCI. B.V.
ACCESSION NUMBER: 1998416632 EMBASE
TITLE: Overexpression of MMP-2, MMP-9 and P-MT gene in human ***gastric*** cancer - A study with immunohistochemistry and hybridization in ***situ*** .
AUTHOR: Nan L.; Caipu X.; Dianchun F.
CORPORATE SOURCE: L. Nan, Department of Digestive Medicine, Navy General Hospital of PLA, Beijing, China
SOURCE: Chinese Journal of Clinical Oncology, (1998) 25/11 (806-809).
Refs: 5
ISSN: 1000-8179 CODEN: ZZLIEP
COUNTRY: China
DOCUMENT TYPE: Journal; Article
FILE SEGMENT: 016 Cancer
048 Gastroenterology
LANGUAGE: Chinese
SUMMARY LANGUAGE: English; Chinese
AB Aims: To study the diagnostic value of combined determination of matrix metalloproteinases MMP-2, MMP-9 and MMP-MT in estimating invasion of

gastric cancer. Methods: Forty-one samples of ***gastric*** cancer tissues and 17 adjacent tissues nearby the cancer were assayed for MMP-2, MMP-9 and MMP-MT by immunohistochemistry (SP method) and hybridization in ***situ*** (cDNA- ***mRNA***). Results: The MMP-2, MMP-9 and MMP-MT levels in ***gastric*** cancer group were much higher than those in the adjacent tissue group ($P<0.05$), and the degree of cancer invasion rose with the change of MMPs. Conclusion: The expression of MMP-2, MMP-9 and MMP-MT levels were significantly correlated with that of ***mRNA*** level. Therefore, it is a better molecular ***marker*** in the assessment of ***gastric*** cancer invasion and ***metastasis*** , and it can be used to predict the prognosis of the tumor.

L43 ANSWER 21 OF 51 EMBASE COPYRIGHT 2001 ELSEVIER SCI. B.V.

ACCESSION NUMBER: 1998130797 EMBASE

TITLE: Expression of ***metastasis*** -related genes in surgical specimens of human ***gastric*** cancer can predict disease recurrence.

AUTHOR: Anzai H.; Kitadai Y.; Bucana C.D.; Sanchez R.; Omoto R.; Fidler I.J.

CORPORATE SOURCE: H. Anzai, Department of Surgery, Saitama Medical School, Saitama 350-04, Japan

SOURCE: European Journal of Cancer, (1998) 34/4 (558-565). Refs: 73
ISSN: 0959-8049 CODEN: EJCAEL

PUBLISHER IDENT.: S 0959-8049(97)10075-2

COUNTRY: United Kingdom

DOCUMENT TYPE: Journal; Article

FILE SEGMENT: 005 General Pathology and Pathological Anatomy
009 Surgery
016 Cancer
029 Clinical Biochemistry
048 Gastroenterology

LANGUAGE: English

SUMMARY LANGUAGE: English

AB It was determined whether the expression level of several genes that regulate different steps of ***metastasis*** in formalin-fixed paraffin-embedded archival specimens of human ***gastric*** cancers correlated with disease recurrence and ***metastasis*** . The steady-state ***mRNA*** expression level for epidermal growth factor receptor (EGF-R), basic fibroblast growth factor (bFGF), E-cadherin, type IV collagenase and multidrug resistance (MDR-1) were examined by a colorimetric in ***situ*** hybridisation (ISH) technique, concentrating on reactivity at the periphery of the lesions. All patients were operated on for cure. 15 cases were disease-free and 10 had disease recurrence by 4.5 years after resection of the primary tumours. The expression of EGF-R and bFGF type IV collagenase was higher and expression of E-cadherin was lower in the disease-recurrence cases than in the disease- free cases. The ratio between the expression level of collagenase type IV and E-cadherin at the periphery of the surgical specimens differed significantly between the disease-free cases and the recurrent- ***metastatic*** cases. These data show that multiparametric ISH analysis for several ***metastasis*** -related genes may allow prediction of disease recurrence of ***gastric*** cancer.

L43 ANSWER 22 OF 51 MEDLINE
ACCESSION NUMBER: 2000456527 MEDLINE
DOCUMENT NUMBER: 20439943
TITLE: Role of insulin-like growth factor-I (IGF-I) receptor, IGF-I, and IGF binding protein-2 in human ***colorectal*** cancers.
AUTHOR: Mishra L; Bass B; Ooi B S; Sidawy A; Korman L
CORPORATE SOURCE: Department of Medicine, Department of Veterans' Affairs Medical Center and Georgetown University Medical Center, Washington DC 20422, USA.
SOURCE: Growth Horm IGF Res, (1998 Dec) 8 (6) 473-9.
Journal code: DA2. ISSN: 1096-6374.
PUB. COUNTRY: SCOTLAND: United Kingdom
Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 200012
ENTRY WEEK: 20001201

AB The identification of novel autocrine/paracrine signaling pathways and possible markers represents an important component in the understanding of tumor growth control. In this study, we assessed the potential role of insulin-like growth factor-I (IGF-I), the IGF-I receptor (IGF-IR) and IGF binding protein-2 (IGFBP-2) in human ***colorectal*** cancer. Initial studies demonstrating increased IGF-I binding and IGF-IR density in human colon cancer tissue revealed that a component of iodinated (3-[125-I]iodotyrosyl) IGF-I (125I-ICGF-I) binding was not attributable to IGF-IR. Binding studies and Western blot analysis suggested that this second component of 125I-IGF-I binding could be due to IGFBP-2. Further analysis by a specific solution hybridization/RNase protection assay for IGF-IR ***mRNA*** levels, IGFBP-2 ***mRNA*** levels and in ***situ*** hybridization for IGFBP-2 localization, was carried out in nine patients with colon cancer. IGF-IR ***mRNA*** levels by RNAse protection assays were unchanged, whereas IGFBP-2 ***mRNA*** levels were increased 4-8-fold in patients with colon cancer compared to controls. Three patients with Dukes stage C disease had the highest levels of IGFBP-2 ***mRNA*** . In ***situ*** hybridization studies localized IGFBP-2 ***mRNA*** to malignant cells and not to the surrounding stromal cells, suggesting an autocrine role for IGFBP-2. The discrepancy between increased IGF-I binding, IGF-IR density, IGFBP-2 ***mRNA*** and the minimal modulation of the IGF-IR ***mRNA*** implies post-transcriptional regulation of IGF-IRs. Our results suggest that IGFBP-2 may be implicated in colon cancer ***metastases*** and prognosis. Its usefulness as a potential tumor ***marker*** should be further investigated.

L43 ANSWER 23 OF 51 EMBASE COPYRIGHT 2001 ELSEVIER SCI. B.V.
ACCESSION NUMBER: 97360622 EMBASE
DOCUMENT NUMBER: 1997360622
TITLE: Cloning and expression of a developmentally regulated transcript MXR7 in hepatocellular carcinoma: Biological significance and temporospatial distribution.
AUTHOR: Hsu H.-C.; Cheng W.; Lai P.-L.
CORPORATE SOURCE: H.-C. Hsu, Department of Pathology, National Taiwan University Hospital, No. 7 Chung-Shan South Road, Taipei, Taiwan,Province of China
SOURCE: Cancer Research, (1997) 57/22 (5179-5184).
Refs: 31

ISSN: 0008-5472 CODEN: CNREA8
COUNTRY: United States
DOCUMENT TYPE: Journal; Article
FILE SEGMENT: 005 General Pathology and Pathological Anatomy
016 Cancer
LANGUAGE: English
SUMMARY LANGUAGE: English
AB Using the differential display method to analyze ***mRNA*** expression in hepatocellular carcinoma (HCC) and nontumor livers, we cloned a full-length cDNA of 2263 bp, which was designated GTR2-2 and was identical with MXR7. The MXR7 ***mRNA*** was detected in 143 of 191 (74.8%) primary and recurrent HCCs taken from 154 patients but only in 5 (3.2%) nontumor livers. MXR7 ***mRNA*** was detected in one of two hepatoblastomas but not in hepatocellular adenoma, cholangiocarcinoma, or ***metastatic*** carcinomas to the liver. In human cancer of other anatomical sites, MXR7 ***mRNA*** was detected in low levels in one Wilms' tumor and in 4 of 40 ***gastric*** adenocarcinomas but not in several other types of cancer and 21 nonhepatocellular human tumor cell lines examined. MXR7 ***mRNA*** was expressed in high levels in the placenta, fetal liver, lung, and kidney, but it was undetectable in adult liver and was expressed in very low levels in adult lung and kidney. Our observations suggest that the MXR7 gene is regulated developmentally and expressed preferentially in HCC. To study its potential biological significance, we selected 113 patients who had unicentric primary HCC and had been followed for more than 4 years for further analysis. The MXR7 ***mRNA*** expression correlated closely with elevated serum .alpha.-fetoprotein (AFP) levels (88 versus 55%; P = 0.0001) and with expression of AFP ***mRNA*** (87 versus 55%; P = 0.005) and CD24 ***mRNA*** in HCC (80 versus 50%; P < 0.04), high tumor grade (76 versus 56%; P = 0.05), and tumor invasion (76 versus 55%; P < 0.05), but not with patient outcome. In HCC .ltoreq.3 cm, the frequency (77%) of MXR7 ***mRNA*** expression was significantly higher than that of elevated serum AFP (43%; p < 0.007) and AFP ***mRNA*** expression in HCC (41%; P < 0.004). Thus, MXR7 may serve as a sensitive early tumor ***marker*** for HCC and warrants more study to better understand its biological function.

L43 ANSWER 24 OF 51 MEDLINE
ACCESSION NUMBER: 97403760 MEDLINE
DOCUMENT NUMBER: 97403760
TITLE: Bladder cancer: natural history, tumor markers, and early detection strategies.
AUTHOR: Foresman W H; Messing E M
CORPORATE SOURCE: University of Rochester Department of Urology, Strong Memorial Hospital, New York, USA..
emessing@medinfo.rochester.edu
SOURCE: SEMINARS IN SURGICAL ONCOLOGY, (1997 Sep-Oct) 13 (5) 299-306. Ref: 45
Journal code: SSO. ISSN: 8756-0437.
PUB. COUNTRY: United States
Journal; Article; (JOURNAL ARTICLE)
General Review; (REVIEW)
(REVIEW, TUTORIAL)
LANGUAGE: English
FILE SEGMENT: Priority Journals

ENTRY MONTH: 199712
ENTRY WEEK: 19971201
AB Transitional cell bladder carcinoma is characterized by a dichotomous, multichronotopic natural history. Low and moderate grade Ta lesions frequently recur, yet rarely invade, and carry an excellent prognosis with currently available treatments. High grade Ta lesions, tumors with ***lamina*** ***propria*** invasion (T1), and carcinoma in ***situ*** often progress to invasive disease, at which time overall prognosis is significantly decreased, despite various treatment alternatives. Although early detection of bladder tumors, prior to muscle invasion, should vastly improve our ability to save both bladders and lives, current methods of detection are neither sufficiently sensitive nor specific. Tumor ***marker*** analysis is an exciting new frontier in bladder cancer evaluation, and may have important applications to early detection strategies, in combination with simple hematuria testing and other selected noninvasive screening methods.

L43 ANSWER 25 OF 51 CAPLUS COPYRIGHT 2001 ACS
ACCESSION NUMBER: 1996:564970 CAPLUS
DOCUMENT NUMBER: 125:219551
TITLE: Subepithelial B cells in the human palatine tonsil. I.
Morphologic, cytochemical and phenotypic characterization
AUTHOR(S): Dono, Mariella; Burgio, Vito L.; Tacchetti, Carlo; Favre, Anna; Augliera, Adriano; Zupo, Simona; Taborelli, Giuseppe; Chiorazzi, Nicholas; Grossi, Carlo E.; Ferrarini, Manlio
CORPORATE SOURCE: Servizio Immunologia Clinica, Instit. Nazionale Ricerca Cancro, Genoa, Italy
SOURCE: Eur. J. Immunol. (1996), 26(9), 2035-2042
CODEN: EJIMAF; ISSN: 0014-2980
DOCUMENT TYPE: Journal
LANGUAGE: English
AB This study describes the purifn. of a subset of tonsillar B cells which share phenotypic, morphol. and cytochem. features with subepithelial (SE) B cells. These cells, which represented the 5-10% of the total tonsillar B cells, were found in the Percoll gradient fraction of highest d., together with resting follicular mantle (FM) B cells. The latter B cells, however, expressed surface CD5 and could be removed by an immune rosetting procedure. The remaining small CD5- B cells had a surface phenotype (IgM+, IgD+, CD23-, CD38.+-., CD10-, CD44+) that was different from that of FM (IgM+, IgD+, CD23+, CD39+, CD38-, CD10-, CD44++) and of germinal center (GC) (CD23-, CD39-, CD38+, CD10+, CD44.+-., IgG+) B cells isolated from the same cell suspensions. Furthermore, the absence of surface activation markers (CD71 and CD69) and of surface IgG allowed us to distinguish small CD5- B cells from activated and memory cells migrating within Percoll fractions of lower d. In ***situ*** immunohistochem. studies revealed that B cells with an identical phenotype as that of small CD5- B cells could be detected predominantly in the SE region (***lamina*** ***propria***) of the tonsil, and also within the epithelium lining the cryptae. This area was also comprised of a relatively minor proportion of activated B cells, not found in the small CD5- B cell fraction owing to the sepn. procedure used. Consistent with the notion that the SE area could be a site of B cell activation was also

the presence of activated macrophages and of plasma cells. Thirty to forty percent of small CD5 B cells isolated in suspension were pos. for the endogeneous alk. phosphatase (ALP) activity. In contrast, only a few FM B cells were ALP+, while GC cells were consistently ALP-. In ***situ*** studies also demonstrated a prevalent expression of ALP activity by the B cells in the SE area. At the ultrastructural level, small CD5- B cells were clearly different from both FM and GC B cells. They displayed a cytoplasm more extended than that of FM B cells with abundant endosomes and plasma membrane projections, and a speckled pattern of nuclear heterochromatin distribution. When fixed tissue sections were examd., cells with identical ultrastructural features could be demonstrated in the tonsillar ***lamina*** ***propria*** . Collectively, the above data demonstrate an identity of features between the small CD5- B cells isolated in suspension and SE B cells analyzed in ***situ*** . Since tonsillar SE B cells are generally thought to represent the homolog of the extra follicular B cells (including those of the splenic marginal zone), these studies may provide new opportunities for functional studies on this so far incompletely characterized B cell subset.

L43 ANSWER 26 OF 51 BIOSIS COPYRIGHT 2001 BIOSIS
ACCESSION NUMBER: 1996:563694 BIOSIS
DOCUMENT NUMBER: PREV199799293050
TITLE: Expression of mitogen-activated protein kinase phosphatase-1 in the early phases of human epithelial carcinogenesis.
AUTHOR(S): Loda, Massimo; Capodieci, Paola; Mishra, Rajesh; Yao, Hong; Corless, Christopher; Grigioni, Walter; Wang, Youbin; Magi-Galluzzi, Cristina; Stork, Philip J. S. (1)
CORPORATE SOURCE: (1) L474, Vollum Inst. Advanced Biomed. Res., 3181 S.W. Sam Jackson Park Rd., Oregon Health Sci. Univ., Portland, OR 97201 USA
SOURCE: American Journal of Pathology, (1996) Vol. 149, No. 5, pp. 1553-1564.
ISSN: 0002-9440.
DOCUMENT TYPE: Article
LANGUAGE: English
AB Many mitogens and human oncogenes activate extracellular regulated kinases (ERKs), which in turn convey proliferation signals. ERKs or mitogen-activated protein (MAP) kinases are inactivated in vitro by MAP kinase phosphatases (MKPs). The gene encoding one of these MKPs, MKP-1, is a serum-inducible gene and is transcriptionally activated by mitogenic signals in cultured cells. As MKP-1 has been shown to block DNA synthesis by inhibiting ERKs when expressed at elevated levels in cultured cells, it has been suggested that it may act as a tumor suppressor. MKP-1 ***mRNA*** and MAP kinase (ERK-1 and -2) protein expression was assessed in 164 human epithelial tumors of diverse tissue origin by in ***situ*** hybridization and immunohistochemistry. MKP-1 was overexpressed in the early phases of prostate, colon, and bladder carcinogenesis, with progressive loss of expression with higher histological grade and in ***metastases*** . In contrast, breast carcinomas showed significant MKP-1 expression even when poorly differentiated or in late stages of the

disease. MKP-1, ERK-1, and ERK-2 were co-expressed in most tumors examined. In a subset of 15 tumors, ERK-1 enzymatic activity as well as structural alterations that might be responsible for loss of function of MKP-1 during tumor progression, were examined. ERK-1 enzymatic activity was found to be elevated despite MKP-1 overexpression. No loss of 5q35-ter (containing the MKP-1 locus) was detected by polymerase chain reaction in ***metastases*** compared with primary tumors. Finally, no mutations were found in the catalytic domain of MKP-1. These data indicate that MKP-1 is an early ***marker*** for a wide range of human epithelial tumors and suggest that MKP-1 does not behave as a tumor suppressor in epithelial tumors.

L43 ANSWER 27 OF 51 MEDLINE DUPLICATE 1
ACCESSION NUMBER: 96184234 MEDLINE
DOCUMENT NUMBER: 96184234
TITLE: Is a histologically normal appendix following emergency appendicectomy alway normal? [see comments].
COMMENT: Comment in: Lancet 1996 Jul 13;348(9020):126-7
AUTHOR: Wang Y; Reen D J; Puri P
CORPORATE SOURCE: Children's Research Centre, Our Lady's Hospital for Sick Children, Dublin, Ireland.
SOURCE: LANCET, (1996 Apr 20) 347 (9008) 1076-9.
Journal code: L0S. ISSN: 0140-6736.
PUB. COUNTRY: ENGLAND: United Kingdom
Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Abridged Index Medicus Journals; Priority Journals; Cancer Journals
ENTRY MONTH: 199607
AB BACKGROUND: Appendixes removed from patients with suspected appendicitis often appear normal on histological examination. We examined appendix specimens for expression of abnormal amounts of cytokines, an indicator of an inflammatory response. METHODS: Tumour necrosis factor alpha (TNFalpha) and interleukin-2 (IL-2) expression was measured by in- ***situ*** hybridisation in ten specimens from patients with acute appendicitis, 12 normal appendix specimens removed from patients undergoing elective abdominal surgery, and 31 appendix specimens from patients with a clinical diagnosis of appendicitis but an appendix histologically classified as normal. Cytokine-specific RNA antisense probes were prepared by in-vitro transcription and digoxigenin (DIG) labelled. In- ***situ*** hybridisation was done on 5 micrometer paraffin sections. Tissue sections hybridised by sense probes acted as negative control for each cytokine. Following hybridisation, the probes were detected by alkaline phosphatase labelled anti-DIG monoclonal antibody and visualised by nitroblue tetrazolium staining. FINDINGS: All histologically proven acute appendicitis specimens demonstrated intense cellular TNFalpha mRNA expression in germinal centres and moderate levels of expression throughout the mucosa. IL-2 mRNA was strongly expressed in the ***lamina*** ***propria*** and only moderately expressed in germinal centres. Normal appendixes all showed almost complete absence of TNFalpha and IL-2 mRNA expression. Seven of the 31 histologically classified normal appendix specimens from patients with a clinical diagnosis of appendicitis demonstrated TNFalpha and IL-2 mRNA expression similar to acute

appendicitis specimens in germinal centres, submucosa, and ***lamina*** ***propria*** layers. INTERPRETATION: TNFalpha and IL-2 mRNA expression is a sensitive ***marker*** of inflammation in appendicitis. A substantial proportion of histologically normal appendixes showed clear evidence of an inflammatory response in the form of increased cytokine expression.

L43 ANSWER 28 OF 51 EMBASE COPYRIGHT 2001 ELSEVIER SCI. B.V.
ACCESSION NUMBER: 96218955 EMBASE
DOCUMENT NUMBER: 1996218955
TITLE: ***Lamina*** ***propria*** macrophages in the human gastrointestinal mucosa: Their distribution, immunohistological phenotype, and function.
AUTHOR: Nagashima R.; Maeda K.; Imai Y.; Takahashi T.
CORPORATE SOURCE: Second Dept. of Internal Medicine, Yamagata U. School of Medicine, 2-2-2 Iida-Nishi,Yamagata 992-23, Japan
SOURCE: Journal of Histochemistry and Cytochemistry, (1996) 44/7 (721-731).
ISSN: 0022-1554 CODEN: JHCYAS
COUNTRY: United States
DOCUMENT TYPE: Journal; Article
FILE SEGMENT: 005 General Pathology and Pathological Anatomy
LANGUAGE: English
SUMMARY LANGUAGE: English
AB In this study we systematically investigated the cellular distribution, immunohistochemical phenotype, and mucosal disposal function of macrophages in the ***lamina*** ***propria*** of the human gastrointestinal mucosa (***lamina*** ***propria*** macrophages; LPMs). In all tissues examined, most of these LPMs accumulated beneath the epithelial layer that covered the apex of the ***lamina*** ***propria*** of the mucosa. These cells expressed normal levels of common macrophage markers such as CD68, LN5, lysozyme, ferritin, and .alpha.1-anti-chymotrypsin. In addition, they expressed high levels of 25F9 (a ***marker*** for a certain subpopulation of macrophages), MHC Class II molecules, and CD74 (MHC Class II-associated invariant chain). Interestingly, LPMs possessed some epithelial cell-associated antigens such as cytokeratin, carcinoembryonic antigen (CEA), and Ber-Ep4 in their cytoplasm. Ultrastructurally, these antigens were associated with cellular debris ingested by LPMs, which were recognized as apoptotic fragments by in ***situ*** end-labeling. Furthermore, double positive- labeled granules were seen in LPMs by double staining for epithelial cell-associated antigens and in ***situ*** end-labeling. These observations suggest that one of the major functions of LPMs is the disposal of apoptotic epithelial cells and that LPMs may be involved in the regulation of mucosal epithelial renewal.

L43 ANSWER 29 OF 51 MEDLINE
ACCESSION NUMBER: 96376775 MEDLINE
DOCUMENT NUMBER: 96376775
TITLE: Neoangiogenesis: a putative ***marker*** of malignancy in non-small-cell lung cancer (NSCLC) development.
AUTHOR: Fontanini G; Vignati S; Bigini D; Lucchi M; Mussi A; Basolo F; Angeletti C A; Bevilacqua G

CORPORATE SOURCE: Department of Pathology, University of Pisa, Italy.
SOURCE: INTERNATIONAL JOURNAL OF CANCER, (1996 Sep 4) 67 (5) 615-9.
Journal code: GQU. ISSN: 0020-7136.
PUB. COUNTRY: United States
Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals; Cancer Journals
ENTRY MONTH: 199612

AB Several studies have documented a relevant prognostic role of microvessel count (MC) in non-small-cell lung carcinomas (NSCLC). However, no evidence has been reported about the involvement of neo-angiogenesis in the development of bronchial cancers. The aim of this study was to analyze microvessel density both in normal and in pathological features of the bronchial tree detected concomitantly with carcinomas. In a group of 34 patients resected for NSCLC, 48 bronchial lesions (hyperplasia, squamous metaplasia, moderate dysplasia and in ***situ*** carcinoma) were identified. In addition, 20 samples of normal bronchial epithelium from the same patients were analyzed. A monoclonal antibody was used in order to identify microvessels in the most intense areas of neovascularization from the bronchial specimens. MC was also analyzed in invasive components.

An increased number of microvessels was observed from normal to dysplastic epithelium, including in ***situ*** carcinoma. Mean MC was significantly lower in normal, hyperplastic and squamous metaplastic epithelium than in dysplastic epithelium and in ***situ*** carcinoma. In particular, no differences were observed between normal and hyperplastic/metaplastic components, whereas a statistically significant difference appeared between the latter and dysplastic lesions. Moderate dysplasia and in ***situ*** carcinoma showed a number of microvessels in the ***lamina*** ***propria*** of their mucosa which were not significantly different from the invasive component, whereas hyperplastic/metaplastic lesions presented a much lower number of microvessels than invasive cancer. From these data it appears that normal bronchial epithelium and lesions associated with cancers of the bronchial tree show neovascularization in their stromal component. Hyperplasia and squamous metaplasia, unlike dysplasia and in ***situ*** carcinoma, show a low microvessel count, and they cannot represent precursor or incipient changes in the bronchial epithelium before the fully developed in ***situ*** stage has also been reached.

L43 ANSWER 30 OF 51 CAPLUS COPYRIGHT 2001 ACS
ACCESSION NUMBER: 1996:185447 CAPLUS
DOCUMENT NUMBER: 124:229622
TITLE: Interleukin-5 ***mRNA*** expressed by eosinophils and .gamma./.delta. T cells in parasite-immune sheep
AUTHOR(S): Bao, Shisan; McClure, Susan J.; Emergy, David L.; Husband, Alan J.
CORPORATE SOURCE: Dep. Vet. Pathol., Univ. Sydney, Sydney, Australia
SOURCE: Eur. J. Immunol. (1996), 26(3), 553-6
CODEN: EJIMAF; ISSN: 0014-2980
DOCUMENT TYPE: Journal
LANGUAGE: English

AB Interleukin (IL)-5 is produced by a variety of cell types and contributes to both lymphocyte development and eosinophil terminal differentiation in vitro. The coincidence of worm expulsion and eosinophilia in sheep infected with the ***gastrointestinal*** nematode Trichostrongylus colubriformis suggests that eosinophils may be involved as effector cells

in host immunity against parasite infection. The role of IL-5 in this process was investigated by observing the distribution of IL-5 ***mRNA*** + cells in the small ***intestine*** , mesenteric lymph nodes (MLN) and Peyer's patches (PP) by an in ***situ*** hybridization technique using a murine IL-5 riboprobe. IL-5 ***mRNA*** + cells were distributed throughout the ***lamina*** ***propria*** (LP) of the small ***intestine*** from the tips of the villi to the muscularis mucosae and in the parafollicular areas of MLN and PP in both naive and immune sheep. The phenotypes of IL-5 nRNA+ cells was explored by simultaneous eosin and immunohistochem. staining using a monoclonal antibody recognizing the T19 ***marker*** , which identifies a major subset of .gamma./.delta. TCR+ cells in sheep. In immune sheep, there was about a five-fold increase in the no. of eosinophils and IL-5 ***mRNA*** + cells in the LP, but there was no significant change in nos. of T19+ cells. Most of the IL-5 ***mRNA*** + cells in the LP were eosinophils, but many of the T19+ cells also expressed IL-5 ***mRNA*** . In contrast, there were fewer eosinophils than T19+ cells in MLN of immune sheep and, compared to controls, a three-fold increase in T19+ cells and a five-fold increase in T19+/IL-5 ***mRNA*** + double-pos. cells was obsd. in immune sheep. In PP, there were very few eosinophils but substantial nos. of T19+ cells; however, no significant differences in nos. of eosinophils, T19+ or IL-5 ***mRNA*** + cells were obsd. between control and immune sheep. The results indicate that in sheep, both eosinophils and .gamma./.delta. T cells are capable of IL-5 expression and suggest that IL-5 is an important regulatory factor in autocrine and paracrine activation of effector cells involved in parasite immune expulsion.

L43 ANSWER 31 OF 51 MEDLINE
ACCESSION NUMBER: 96182284 MEDLINE
DOCUMENT NUMBER: 96182284
TITLE: Interleukin-5 ***mRNA*** expressed by eosinophils and gamma/delta T cells in parasite-immune sheep.
AUTHOR: Bao S; McClure S J; Emery D L; Husband A J
CORPORATE SOURCE: Department of Veterinary Pathology, The University of Sydney, Australia.
SOURCE: EUROPEAN JOURNAL OF IMMUNOLOGY, (1996 Mar) 26 (3) 552-6. Journal code: EN5. ISSN: 0014-2980.
PUB. COUNTRY: GERMANY: Germany, Federal Republic of
Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals; Cancer Journals
ENTRY MONTH: 199607
AB Interleukin (IL)-5 is produced by variety of cell types and contributes to both lymphocyte development an eosinophil terminal differentiation in vitro. The coincidence of worm expulsion and eosinophilia in sheep infected with the ***gastrointestinal*** nematode Trichostrongylus colubriformis suggest that eosinophils may be involved as effector cells in host immunity against parasite infection. The role of IL-5 in this process was investigated by observing the distribution of IL-5 ***mRNA*** + cells in the small ***intestine*** , mesenteric lymph nodes (MLN) and Peyer's patches (PP) by an in ***situ***

hybridization
technique using a murine IL-5 riboprobe. IL-5 ***mRNA*** + cells were distributed throughout the ***lamina*** ***propria*** (LP) of the small ***intestine*** from the tips of the villi to the muscularis mucosae and in the parafollicular areas of MLN and PP in both naive and immune sheep. The phenotypes of IL-5 ***mRNA*** + cells was explored by
simultaneous eosin and immunohistochemical staining using a monoclonal antibody recognizing the T19 ***marker*** , which identifies a major subset of gamma/delta TCR+ cells in sheep. In immune sheep, there was about a five-fold increase in the number of eosinophils and IL-5 cell ***mRNA*** + cells in the LP, but there was no significant change in numbers of T19+ cells. Most of the IL-5 ***mRNA*** cells in the LP were eosinophils, but many of the T19+ cells also expressed IL-5 ***mRNA*** . In contrast, there were fewer eosinophils than T19+ cells in
MLN of immune sheep and, compared to controls, a three-fold increase in T19+ cells and a five-fold increase in T19+/IL-5 ***mRNA*** + double positive cells observed in immune sheep. In PP, there were very few eosinophils but substantial numbers of T19+ cells; however, no significant
differences in numbers of eosinophils, T19+ or IL-5 ***mRNA*** + cells were observed between control and immune sheep. These results indicate that in sheep, both eosinophils and gamma/delta T cells are capable of IL-5 expression and suggest that IL-5 is an important regulatory factor in
autocrine and paracrine activation of effector cells involved in parasite immune expulsion.

L43 ANSWER 32 OF 51 BIOSIS COPYRIGHT 2001 BIOSIS
ACCESSION NUMBER: 1996:221938 BIOSIS
DOCUMENT NUMBER: PREV199698778067
TITLE: Induction of NGAL synthesis in epithelial cells of human ***colorectal*** neoplasia and inflammatory bowel diseases.
AUTHOR(S): Nielsen, B. S.; Borregaard, N. (1); Bundgaard, J. R.; Timshel, S.; Sehested, M.; Kjeldsen, L.
CORPORATE SOURCE: (1) Granulocyte Research Lab., Dep. Hematol., L-4042, Univ.
Hosp., Rigshospitalet, Blegdamsvej 9, 2100 Copenhagen O Denmark
SOURCE: Gut, (1996) Vol. 38, No. 3, pp. 414-420.
ISSN: 0017-5749.
DOCUMENT TYPE: Article
LANGUAGE: English
AB In inflammatory and neoplastic disorders of the colon a defect barrier function of the mucosa may result in absorption of bacterial products from
the ***intestinal*** lumen. These products may further recruit inflammatory cells and thus augment the inflammatory response. A novel lipocalin in neutrophils, neutrophil gelatinase associated lipocalin (NGAL), with the ability to bind bacterial formylpeptides, has been described and therefore it is of interest to investigate the expression of
this protein in diseases of the colon. Expression of NGAL was investigated
by immunohistochemistry and by ***mRNA*** in ***situ*** hybridisation in normal colon and in neoplastic and inflammatory ***colorectal*** diseases. A very high expression of NGAL was seen in colonic epithelium in areas of inflammation, both in nonmalignant

epithelium (diverticulitis, inflammatory bowel disease, and appendicitis) as well as in premalignant and malignant neoplastic lesions of the colon. In adenocarcinoma, the NGAL expression was especially abundant in the transitional mucosa and in the superficial ulcerated area. On the other hand, no NGAL expression could be detected in lymph node ***metastases*** from these adenocarcinomas. A weak expression of NGAL in some epithelial cells was only occasionally seen in normal colon. In conclusion, NGAL synthesis is induced in epithelial cells in inflammatory and neoplastic, ***colorectal*** diseases. NGAL may serve an important anti-inflammatory function as a scavenger of bacterial products.

L43 ANSWER 33 OF 51 MEDLINE DUPLICATE 2
ACCESSION NUMBER: 96265290 MEDLINE
DOCUMENT NUMBER: 96265290
TITLE: PDGF-B producing cells and PDGF-B gene expression in normal gingival and cyclosporine A-induced gingival overgrowth.
AUTHOR: Plemons J M; Dill R E; Rees T D; Dyer B J; Ng M C; Iacopino A M
CORPORATE SOURCE: Department of Periodontics, Baylor College of Dentistry, Dallas, TX, USA.
CONTRACT NUMBER: R03 DE11181-01 (NIDCR)
R29 DE11553-01 (NIDCR)
SOURCE: JOURNAL OF PERIODONTOLOGY, (1996 Mar) 67 (3) 264-70.
Journal code: JMT. ISSN: 0022-3492.
PUB. COUNTRY: United States
Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals; Dental Journals
ENTRY MONTH: 199611

AB It has been proposed that healthy gingiva is in a continuous state of wound repair. Thus, one might expect to find cells in normal gingiva producing growth factors associated with wound healing such as platelet-derived growth factor B chain (PDGF-B). One might also expect to find increased numbers of these cells or increased amounts of these growth factors in conditions which involve increased tissue volume such as drug-induced gingival overgrowth (DGO). The purpose of this study was to quantify PDGF-B gene expression and identify cells producing PDGF-B in normal gingiva and DGO. Cyclosporine A (CSA) was selected as a prototype of the overgrowth condition. Twelve patients with clinical CSA DGO and 12 patients with no DGO or history of drugs known to cause DGO were selected for study. Frozen sections of gingival specimens from these patients were subjected to in ***situ*** hybridization for PDGF-B mRNA. Positive cells were counted and expressed as mean +/- SEM cells/mm2 of ***lamina*** ***propria*** . Morphometric analysis revealed 6.2 +/- 1.9 cells/mm2 for control gingiva and 10.3 +/- 3.4 cells/mm2 for CSA DGO samples. There was no statistically significant difference between groups.
PDGF-B gene expression was measured in these cells and expressed as mean +/- SEM silver grains/cells. There was a significant upregulation of PDGF-B gene expression in cells from the CSA DGO group (39.5 +/- 14.7 silver grains/cell for normal gingiva vs. 255.3 +/- 77.1 silver grains/cell for CSA DGO samples; $P < 0.001$). The presence of PDGF-B in these cells was confirmed in all cases by immunocytochemical localization.

Additionally, PDGF-B producing cells were identified as macrophages in sections taken from an additional patient with CSA DGO by double immunofluorescence labeling of the CD51 membrane ***marker*** for macrophages and intracellular PDGF-B. These findings are consistent with the concept that healthy gingiva is in a continuous state of wound repair and support the hypothesis that CSA DGO is associated with enhanced macrophage PDGF-B gene expression rather than an increase in the number of PDGF-B producing macrophages.

L43 ANSWER 34 OF 51 MEDLINE
ACCESSION NUMBER: 96405873 MEDLINE
DOCUMENT NUMBER: 96405873
TITLE: Manifestations of the local gastric immune response in gnotobiotic piglets infected with Helicobacter pylori.
AUTHOR: Krakowka S; Ringler S S; Eaton K A; Green W B; Leunk R
CORPORATE SOURCE: Department of Veterinary Biosciences, College of Veterinary Medicine, Ohio State University, Columbus 43210, USA.
CONTRACT NUMBER: DK3950 (NIDDK)
R29 DK45340 (NIDDK)
SOURCE: VETERINARY IMMUNOLOGY AND IMMUNOPATHOLOGY, (1996 Jul) 52 (3) 159-73.
Journal code: XCB. ISSN: 0165-2427.
PUB. COUNTRY: Netherlands
Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 199704
ENTRY WEEK: 19970402
AB Helicobacter pylori, a human gastric bacterial pathogen, was inoculated into gnotobiotic piglets and manifestations of the resultant gastric inflammation was analyzed by in ***situ*** immunochemistry and flow cytometric analysis of isolated ***lamina*** ***propria*** leukocytes (LPL) and peripheral blood leukocytes (PBL) recovered from infected and control piglets. Gastric mucosa tissue sections from uninfected control piglets were essentially negative for cluster differentiation- (CD-) positive leukocytes. Failure to isolate significant numbers of LPL from the gastric ***lamina*** ***propria*** confirmed this observation. A local and systemic immune response occurs in piglets after infection with H. pylori. This is manifest by the appearance of cells associated with a local immune response in gastric mucosa. In gastric tissue sections from H. pylori-infected piglets, CD4-positive leukocytes were sparse and closely associated with developing lymphoid follicles whereas the CD8-positive cellular phenotype was abundant. The latter formed a continuous band in the ***lamina*** ***propria*** just above the muscularis mucosa. Perivascular accumulations of lymphocytes in the outer muscular tunic(s) were strongly positive for expression of CD8 antigen. Class II-positive cells were prominent in CD8 lymphocytic infiltrates, developing follicles and vascular endothelia but were uniformly absent from gastric epithelia even in sites overlying areas of immunocyte proliferation and infiltration. Leukocytes possessing the monocyte and granulocyte markers were rare. Plasma cells containing IgA were common in the periphery of developing lymphoid follicles or distributed as discrete foci around individual gastric pits. Fewer numbers

of IgG- and IgM-positive plasma cells were identified. When the LPL flow cytometry data were compared with the flow cytometry data obtained from PBL in these same H. pylori-infected piglets, leukocytes bearing the CD8 ***marker*** predominated in LPL whereas leukocytes bearing the CD4-reactive and MHC class II markers predominated in PBL. Finally, local ELISA antibody responses were measured in mucosal explant culture supernatants and compared with in vivo antibody levels in sera, bile, and gastric juice. Antibody activity, specific for H. pylori, was detected in supermatants and serum in all three isotypes in actively infected piglets whereas gastric juice lacked antibodies. Gastric explants prepared from piglets in which infection had been successfully eradicated failed to produce local antibody into supermatant fluids. These data support the concept that the gastric inflammation observed is mediated by local immunological events.

L43 ANSWER 35 OF 51 EMBASE COPYRIGHT 2001 ELSEVIER SCI. B.V.
ACCESSION NUMBER: 95348975 EMBASE
DOCUMENT NUMBER: 1995348975
TITLE: Importance in diagnosis of ***gastritis*** of detection by ***PCR*** of the cagA gene in Helicobacter pylori strains isolated from children.
AUTHOR: Husson M.-O.; Gottrand F.; Vachee A.; Dhaenens L.; De la Salle E.M.; Turck D.; Houcke M.; Leclerc H.
CORPORATE SOURCE: Laboratoire de Bacteriologie A, Faculte de Medecine, Hopital C. Huriez,59045 Lille, France
SOURCE: Journal of Clinical Microbiology, (1995) 33/12 (3300-3303).
ISSN: 0095-1137 CODEN: JCMIDW
COUNTRY: United States
DOCUMENT TYPE: Journal; Article
FILE SEGMENT: 004 Microbiology
005 General Pathology and Pathological Anatomy
007 Pediatrics and Pediatric Surgery
048 Gastroenterology
LANGUAGE: English
SUMMARY LANGUAGE: English
AB The cagA gene has been detected by ***PCR*** and DNA hybridization in 45 Helicobacter pylori strains isolated from children. For each child, clinical symptoms, endoscopic aspect of the ***gastric*** mucosa, and histological ***gastritis*** were evaluated. Gene-positive strains were associated with hemorrhagic ***gastritis*** in 66.6% of the children, while gene-negative strains were associated with hemorrhagic ***gastritis*** in 11.2% of the children (P = 0.0001). In addition, 88.8% of gene-positive strains were associated with severe histological ***gastritis*** (scores of 3 and 4), and gene-negative strains were collected from the ***gastric*** mucosa with the same type of infiltration of neutrophils and lymphocytes in the ***lamina*** ***propria*** in 55.5% of the children. These differences were statistically significant (P = 0.017). Gene-positive strains were also isolated more frequently from children with vomiting (P = 0.04), while the absence of clinical signs was not significantly different in cagA gene-positive or negative patients. All of these observations confirmed the role of this capA gene as a ***marker*** of ***gastric*** inflammation in children. The detection of this gene might be helpful to determine the degree of inflammation of the ***gastric*** mucosa in the absence of abdominal symptoms. We might better understand the natural history of H. pylori infection if we studied the evolution of ***gastritis*** in children with regard to the cagA gene status of

isolated strains.

L43 ANSWER 36 OF 51 MEDLINE
ACCESSION NUMBER: 96091802 MEDLINE
DOCUMENT NUMBER: 96091802
TITLE: Intra-epithelial lymphocytes. Evidence for regional specialization and extrathymic T cell maturation in the human gut epithelium.
AUTHOR: Lundqvist C; Baranov V; Hammarstrom S; Athlin L; Hammarstrom M L
CORPORATE SOURCE: Department of Immunology, Umea University, Sweden.
SOURCE: INTERNATIONAL IMMUNOLOGY, (1995 Sep) 7 (9) 1473-87. Journal code: AY5. ISSN: 0953-8178.
PUB. COUNTRY: ENGLAND: United Kingdom
Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 199603

AB The human gut epithelium is a unique immunological compartment, containing substantial amounts of intra-epithelial lymphocytes (IEL) with unknown functions. In this study we show that distinct and unusual subpopulations of IEL are present at different levels of human ***intestine*** . IEL phenotypes in normal jejunum, ileum and colon were compared using immunoflow cytometry and immunohistochemistry. The expression of ***mRNA*** for recombination-activating gene-1 (RAG-1) in IEL from all three levels was compared using reverse-transcription polymerase chain reaction, and the morphology of IEL in situ was determined using immunoelectron microscopy. Surface ***marker*** profiles of isolated ***intestinal*** epithelial cells at all three levels were also investigated. On average the proportion of TCR gamma delta IEL was comparable in jejunum than ileum and colon and varied in phenotype with gut level. CD4-CD8-TCR alpha beta IEL dominated in colon but were absent in jejunum. CD8+ TCR alpha beta IEL were present at all levels but only in jejunum did they constitute the majority of all IEL. CD4+ TCR alpha beta IEL were present in similar frequencies at all levels of the gut. In general, the majority of IEL had an activated phenotype (CD45RO+, alpha E beta 7+). Furthermore, IEL exhibited phenotypes which are rare in peripheral blood. The thymocyte markers CD1a and CD1c as well as the NK cell ***marker*** CD56 were expressed on a fraction of TCR alpha beta and TCR gamma delta IEL. A small population of 'null' cells (CD45+ TCR/CD#-CD20-CD14-CD15- cells) was also present at equal proportions along the gut. Jejunal but not colonic IEL expressed RAG-1 ***mRNA*** suggesting that extrathymic T cell maturation occurs in the epithelium of small ***intestine*** . RAG-1 was expressed in CD2+TCR/CD3- and CD3+/TCR-IEL. Ultrastructurally, IEL often formed small clusters and intimate contacts with epithelial cells, suggesting cell cooperation within the epithelium. Some IEL had pseudopodium-like extensions penetrating the epithelial ***basement*** ***membrane*** suggesting transmigration. Epithelial cells in small ***intestine*** but not colon expressed heat shock protein 60 and HLA-DR. CD1a, CD1b and CD1c were not expressed on ***intestinal*** epithelial cells at any level. The distinct surface ***marker*** profiles of IEL and epithelial cells along small and large ***intestine*** suggest functional regional specialization and are compatible with the hypothesis that TCR alpha beta IEL participate in immune reactions to lumenal antigens while TCR gamma delta IEL perform surveillance of the

epithelium.

L43 ANSWER 37 OF 51 MEDLINE
ACCESSION NUMBER: 95329668 MEDLINE
DOCUMENT NUMBER: 95329668
TITLE: Human olfactory receptor neurons contain OMP mRNA in their dendritic and axonal processes.
AUTHOR: Krishna N S; Getchell M L; Buiakova O I; Margolis F L; Getchell T V
CORPORATE SOURCE: Division of Otolaryngology-Head and Neck Surgery, Sanders-Brown Center of Aging, Lexington, KY, USA..
CONTRACT NUMBER: DC-00159 (NIDCD)
DC-01715 (NIDCD)
SOURCE: NEUROREPORT, (1995 Mar 27) 6 (5) 817-21.
Journal code: A6M. ISSN: 0959-4965.
PUB. COUNTRY: ENGLAND: United Kingdom
Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 199510
AB The cellular expression of olfactory ***marker*** protein (OMP) mRNA and protein was investigated in the olfactory mucosa of humans ranging in age from 26 weeks of gestation to 85 years using in ***situ*** hybridization and immunocytochemistry. OMP mRNA and protein were most abundant in the somas of olfactory receptor neurons (ORNs). The hybridization signal over the ORN somal layer was greater in older subjects than in younger ones, reflecting either a higher neuronal density
or more OMP mRNA per cell. In contrast, it was significantly lower in subjects with Alzheimer's disease when compared with an age-matched control. Characteristics of older subjects were patchiness in the distribution of OMP-expressing ORNs and the occurrence of subepithelial invaginations containing OMP-positive neurons. In addition, a significant hybridization signal was detected in the apical olfactory epithelium containing the dendrites, dendritic knobs, and cilia of ORNS, and over olfactory nerve bundles in the ***lamina*** ***propria*** , indicating the occurrence of OMP mRNA in dendritic and axonal domains.

L43 ANSWER 38 OF 51 BIOSIS COPYRIGHT 2001 BIOSIS
ACCESSION NUMBER: 1995:314851 BIOSIS
DOCUMENT NUMBER: PREV199598329151
TITLE: Expression of tumour necrosis factor-alpha, interleukin-6, and interleukin-2 ***mRNA*** in the jejunum of patients
with coeliac disease.
AUTHOR(S): Kontakou, M.; Przemioslo, R. T.; Sturgess, R. P.; Limb, A. G.; Ciclitira, P. J. (1)
CORPORATE SOURCE: (1) Gastroenterol. Unit, UMDS, St. Thomas' Hosp., Lambeth Palace Rd., London SE1 7EH UK
SOURCE: Scandinavian Journal of Gastroenterology, (1995) Vol. 30, No. 5, pp. 456-463.
ISSN: 0036-5521.
DOCUMENT TYPE: Article
LANGUAGE: English
AB Background: A T-cell-mediated immune response may be responsible for the enteropathy seen in coeliac disease (CD), but it is unclear whether this is initiated in the epithelium or the ***lamina*** ***propria*** . We studied the site and number of cells expressing ***mRNA*** encoding
the cytokines interleukin-2 (IL-2), IL-6, and tumour necrosis factor-

alpha
in jejunal biopsy specimens from patients with untreated or treated CD and normal controls. Methods: Tissue sections were hybridized with 35S-labelled DNA oligonucleotide probes specific for each cytokine RNA sequence. Positive cells were counted in the ***lamina*** ***propria*** and epithelial compartments. Results: For each cytokine significantly greater numbers of positive cells were found in the ***lamina*** ***propria*** of untreated CD patients. Few positive cells were detected in the epithelium of all three groups. Conclusions: This study shows that the immune response to gliadin appears to occur in the ***lamina*** ***propria*** and supports cell-mediated immunity in the pathogenesis of coeliac disease.

L43 ANSWER 39 OF 51 MEDLINE
ACCESSION NUMBER: 95300991 MEDLINE
DOCUMENT NUMBER: 95300991
TITLE: Expression of epidermal growth factor receptor messenger RNA in human ***colorectal*** carcinomas assessed by non-radioactive in- ***situ*** hybridization.
AUTHOR: Komuta K; Koji T; Izumi S; Matsumoto T; Kohara N; Motojima K; Kanematsu T; Nakane P K
CORPORATE SOURCE: Department of Surgery II, Nagasaki University School of Medicine, Japan.
SOURCE: EUROPEAN JOURNAL OF SURGICAL ONCOLOGY, (1995 Jun) 21 (3) 269-75.
Journal code: EUR. ISSN: 0748-7983.
PUB. COUNTRY: ENGLAND: United Kingdom
Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals; Cancer Journals
ENTRY MONTH: 199509
AB No consensus as to the involvement of the epidermal growth factor receptor (EGF-R) in ***colorectal*** carcinomas has yet been attained, although they are assumed to play a role in the ***metastasis*** to lymph nodes and recurrence of breast carcinoma and bladder carcinoma invasion. Knowing that Dukes' classification of ***colorectal*** carcinoma is closely related to prognosis, we examined whether there is a correlation between Dukes' classification and the expression of EGF-R in ***colorectal*** carcinoma. If there is a positive correlation, the involvement of EGF-R in the processes may be assumed and the expression of EGF-R may be used as a ***marker*** of their prognosis. To this end, the expression of EGF-R ***mRNA*** and protein by non-radioactive in- ***situ*** hybridization and immunohistochemistry, respectively, were determined on histological preparations of formalin-fixed paraffin-embedded ***colorectal*** surgical specimens. In 30 cases of ***colorectal*** carcinoma examined, ***mRNA*** and/or protein was detected in 33% (two of six) of Dukes' A, in 40% (four of 10) of Dukes' B, in 36% (four of 11) of Dukes' C, in 33% (one of three) of Dukes' D and in 0% of normal colon epithelial cells. Thus, there was no positive correlation between the Dukes' classification and the expression of EGF-R. It is concluded that the expression of EGF-R in ***colorectal*** carcinoma is not a

promising ***marker*** of prognosis. However, the role of EGF-R in EGF-R positive tumours remains to be examined.

L43 ANSWER 40 OF 51 MEDLINE
ACCESSION NUMBER: 96164784 MEDLINE
DOCUMENT NUMBER: 96164784
TITLE: Characterization of a distinct subpopulation of bovine gamma delta T cells.
AUTHOR: Amadori M; Archetti I L; Verardi R; Berneri C
CORPORATE SOURCE: Istituto Zooprofilattico Sperimentale della Lombardia e dell'Emilia, Brescia, Italy.
SOURCE: ZENTRALBLATT FUR VETERINARMEDIZIN. REIHE B, (1995 May) 42 (3) 162-74.
Journal code: Y72. ISSN: 0931-1793.
PUB. COUNTRY: GERMANY: Germany, Federal Republic of
Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
ENTRY MONTH: 199604
AB A population of mononuclear cytotoxic cells from peripheral blood leucocytes of cattle showed no usual markers of B and T lymphocytes. However, it could be allocated to a previously unreported gamma delta T cell compartment. This assumption was suggested by: 1. The surface expression of CD3; 2. ***PCR*** amplification of the C delta TcR gene from cDNA; and 3. The detection of peripheral blood precursors expressing the workshop cluster (WC) 1 ***marker*** of bovine gamma delta T cells. These cells are recognized by murine monoclonal antibodies (mAbs) 5D4, 1E7, 6F9 and 8D7, raised in the authors' laboratory. The above mAbs also identify distinct groups of cells in thymus, spleen, lymph nodes and about 1% of uncultured PBL. The most diffuse infiltration of such cells was shown in the small ***intestine*** , as both intraepithelial and ***lamina*** ***propria*** lymphocytes. Mucosal homing activity was confirmed by immunoperoxidase staining on tongue and pharynx sections of healthy cattle.

L43 ANSWER 41 OF 51 BIOSIS COPYRIGHT 2001 BIOSIS
ACCESSION NUMBER: 1994:273734 BIOSIS
DOCUMENT NUMBER: PREV199497286734
TITLE: Albumin gene expression in liver tumors: Diagnostic interest in fine needle aspiration biopsies.
AUTHOR(S): Papotti, Mauro (1); Pacchioni, Donatella; Negro, Francesco; Bonino, Ferruccio; Bussolati, Gianni
CORPORATE SOURCE: (1) Dip. Sci. Biomed. Oncol. Umana, Univ. Torino, Via Santena 7, I-10126 Torino Italy
SOURCE: Modern Pathology, (1994) Vol. 7, No. 3, pp. 271-275.
ISSN: 0893-3952.
DOCUMENT TYPE: Article
LANGUAGE: English
AB Albumin is a specific product of normal and transformed hepatocytes, but unfortunately its immunohistochemical demonstration proves unreliable because of diffusion artifacts. An in ***situ*** hybridization procedure to reveal albumin ***mRNA*** was applied to fine needle aspiration specimens of liver nodes with the aim of testing the usefulness of this ***marker*** in the cytological diagnosis of hepatocellular carcinomas (HCC). A 51-base pair oligonucleotide probe was labeled with digoxigenin and used on paraffin sections of alcohol-fixed cell blocks. A series of 97 cases originally interpreted, on the basis of cytology alone,

as "hepatocellular carcinoma" (62 cases), as "carcinoma cells, not otherwise specified" (15 cases), as "adeno-carcinoma" (16 cases), and as "non-epithelial neoplastic cells" (4 cases), was studied. In all cases, clinical and follow-up information was obtained; a diagnosis of HCC was reached with certainty in 44 cases and suspected in 22. Thirty-one other cases were proven to be bile duct adenocarcinomas or ***metastatic*** tumors. Taking into account proven cases only, albumin ***mRNA*** was found in 42/44 HCC and in none of the control cases (sensitivity, 95.5%; specificity, 100%). Of 22 cytologically suspected HCC, albumin ***mRNA*** was positive in 19 cases. Also, high grade pleomorphic HCCs expressed albumin gene, and this finding is of value in the differential diagnosis with liver ***metastases*** of anaplastic tumors from lung, adrenal, pancreas, etc. The diagnosis of HCC on a cytological basis is becoming increasingly important because most cases are unresectable and have to be included in different therapeutic protocols. We conclude that albumin gene detection by in ***situ*** hybridization is a highly specific procedure useful for reaching the clinically relevant diagnosis of tumors of hepatocellular lineage.

L43 ANSWER 42 OF 51 MEDLINE
ACCESSION NUMBER: 94078135 MEDLINE
DOCUMENT NUMBER: 94078135
TITLE: Gluten stimulation of coeliac mucosa in vitro induces activation (CD25) of ***lamina*** ***propria*** CD4+ T cells and macrophages but no crypt-cell hyperplasia.
AUTHOR: Halstensen T S; Scott H; Fausa O; Brandtzaeg P
CORPORATE SOURCE: Laboratory for Immunohistochemistry and Immunopathology (LIIPAT), University of Oslo, National Hospital, Norway..
SOURCE: SCANDINAVIAN JOURNAL OF IMMUNOLOGY, (1993 Dec) 38 (6) 581-90.
Journal code: UCW. ISSN: 0300-9475.
PUB. COUNTRY: ENGLAND: United Kingdom
Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals; Cancer Journals
ENTRY MONTH: 199403
AB Jejunal biopsy specimens from 10 patients with treated coeliac disease and seven non-coeliac controls were challenged in vitro with peptic-tryptic gluten digest. Mucosal T cells were examined in ***situ*** by three-colour immunofluorescence staining for expression of the activation ***marker*** CD25 (the p55 alpha-chain of interleukin-2 receptor) and the nuclear proliferation ***marker*** revealed by monoclonal antibody Ki-67. Intraepithelial T cells expressed CD25 rarely whereas the proportion of activated ***lamina*** ***propria*** T cells increased ($P < 0.002$) from median 2.8% (cultured with 20% fetal calf serum alone for 24-48 h) to 10.0% after 24 h with gluten ($n = 10$; range 1.1-17.4%) and to 10.4% after 48 h ($n = 7$; range 1.4-17.5%). Such gluten-induced increase of CD25+ T cells was not observed in specimens from non-coeliac control subjects. Crypt-cell hyperplasia and T-cell proliferation (Ki-67+) were observed neither in the coeliac nor in the control mucosae after gluten stimulation. Three-colour staining combining a polyclonal antibody reagent to CD3 and a monoclonal antibody to CD25 with a monoclonal antibody to CD45R0, CD4, CD8, the p75 beta-chain of interleukin-2 receptor, integrin alpha E beta 7, or HLA-DR showed that most of the CD25+ T cells (> 90%) were CD4+CD8-, co-expressed CD45R0 and

the p75 beta-chain, and often also the integrin alpha E beta 7 but not HLA-DR. In addition to these activated T cells, a dominating population of CD25+CD3-CD4+ subepithelial pan-HLA-class II+ macrophages (CD68+) with variable expression of the p75 beta-chain was often induced by gluten challenge.

L43 ANSWER 43 OF 51 EMBASE COPYRIGHT 2001 ELSEVIER SCI. B.V.
ACCESSION NUMBER: 92319321 EMBASE
DOCUMENT NUMBER: 1992319321
TITLE: Direct in vitro infection of human intestine with HIV-1.
AUTHOR: Fleming S.C.; Kapembwa M.S.; MacDonald T.T.; Griffin G.E.
CORPORATE SOURCE: Clin. Biochem. Metabolic Medicine, The Medical School, University of Newcastle-upon-Tyne, Framlington Place,Newcastle NE2 4HH, United Kingdom
SOURCE: AIDS, (1992) 6/10 (1099-1104).
ISSN: 0269-9370 CODEN: AIDSET
COUNTRY: United Kingdom
DOCUMENT TYPE: Journal; Article
FILE SEGMENT: 004 Microbiology
005 General Pathology and Pathological Anatomy
048 Gastroenterology
LANGUAGE: English
SUMMARY LANGUAGE: English
AB Objective: To directly infect human fetal intestine with HIV in vitro. Design: Human fetal intestinal explant cultures were exposed to HIV-1 and monitored for evidence of infection by biochemical assay, immunohistochemistry and in ***situ*** hybridization. Methods: Human fetal intestinal explants (14-21 weeks) were established in culture and exposed to HIV-1. Tissue culture fluid was assayed for p24 antigen and reverse transcriptase activity over a 14-day period. Explants were removed from culture on days 4, 7, 10 and 14 postinoculation and subjected (1) to immunohistochemistry to detect p24 and gp160/41 antigens, and (2) to in ***situ*** hybridization to detect HIV-1 RNA. Explant tissue culture fluid was cocultured with Jurkat T-cells to detect infectious viral particles. Results: Reverse transcriptase activity and p24 antigen levels in fetal explant culture fluid rose between 7 and 14 days after viral inoculation. Jurkat T-cell cocultures confirmed the presence of infectious virus. Cells in the ***lamina*** ***propria*** resembling lymphocytes and macrophages of both small intestine and colon stained positively for the viral proteins p24 and gp41. The same type of cells also stained positively for HIV-1 RNA using in ***situ*** hybridization. Dual-label immunohistochemistry, combined immunohistochemistry and in ***situ*** hybridization confirmed the presence of viral protein and RNA in cells bearing the CD3, CD4 (lymphocyte) or CD68 (macrophage) surface markers. There was no evidence at any time of HIV-1 infection of epithelial cells. Conclusions: Cells of the ***lamina*** ***propria*** of the small intestine and colon, bearing lymphocyte or macrophage markers, can be directly infected by and support the replication of HIV-1 Such infection may be implicated in the pathogenesis of HIV enteropathy.

L43 ANSWER 44 OF 51 MEDLINE
ACCESSION NUMBER: 93109264 MEDLINE
DOCUMENT NUMBER: 93109264
TITLE: Cellular and molecular biological study of the laminin-binding protein and its clinical application.
AUTHOR: Mafune K; Konishi T; Idezuki Y; Steele G D Jr; Ravikumar T

S
CORPORATE SOURCE: Second Department of Surgery, Faculty of Medicine, University of Tokyo, Japan..
SOURCE: NIPPON GEKA GAKKAI ZASSHI. JOURNAL OF JAPAN SURGICAL SOCIETY, (1992 Sep) 93 (9) 956-9.
Journal code: NGG. ISSN: 0301-4894.
PUB. COUNTRY: Japan
Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: Japanese
FILE SEGMENT: Priority Journals
ENTRY MONTH: 199303
AB Tumor invasion and metastasis involve the interaction between tumor cells and ***basement*** ***membrane*** , which is mediated in part by laminin receptors. To search for tumor-associated-genes which can be used as new markers in colon cancers with known poor prognosis, cDNA libraries from a colon cancer cell line and colonic tissues were constructed and screened. We selected a cDNA clone which encodes 32-kD laminin-binding protein (LBP-32), and showed increased ***mRNA*** expression of LBP-32
in colon carcinoma. This ***mRNA*** expression was also correlated with clinical tumor staging. Furthermore, to investigate the role of LBP-32 in cancer invasion and metastasis, cell adhesion assays and in vitro invasion assays were performed, using anti-sense RNA of LBP-32 to block the synthesis of LBP-32. Results showed that anti-sense RNA of LBP-32 inhibits tumor cell attachment and invasiveness in vitro in transfectants of a colon cancer cell line. These data suggest that LBP-32 may play an important role in colon cancer progression, and that LBP-32 may be used as a ***marker*** of biological aggressiveness. These findings also imply that laminin receptors may provide a target for novel therapeutic strategies: modulating LBP-32 expression by anti-sense RNA or monoclonal antibodies may have clinical application in ***colorectal*** cancer therapy.

L43 ANSWER 45 OF 51 EMBASE COPYRIGHT 2001 ELSEVIER SCI. B.V.
ACCESSION NUMBER: 92221358 EMBASE
DOCUMENT NUMBER: 1992221358
TITLE: Immunology of inflammatory bowel disease.
AUTHOR: Chadwick V.S.
CORPORATE SOURCE: Department of Experimental Medicine, University of Otago Medical School, P.O. Box 913,Dunedin, New Zealand
SOURCE: Current Opinion in Gastroenterology, (1992) 8/4 (634-640).
ISSN: 0267-1379 CODEN: COGAEK
COUNTRY: United Kingdom
DOCUMENT TYPE: Journal; General Review
FILE SEGMENT: 005 General Pathology and Pathological Anatomy
026 Immunology, Serology and Transplantation
037 Drug Literature Index
048 Gastroenterology
LANGUAGE: English
SUMMARY LANGUAGE: English
AB The increasing application of monoclonal antibody technology and FACScan analysis to the phenotyping of immunocytes in ***situ*** or after isolation from tissues is having a considerable impact on understanding of
intestinal mucosal immunity. Cells can be classified as to type and state of activation. So far, however, we have no really acceptable hypothesis for the immunopathogenesis of inflammatory bowel disease. These techniques
may need to be applied to clinical situations, such as pouchitis following

pelvic ileal pouch operation for ulcerative colitis and recurrence in the neoterminal ileum following ileocolonic resection for Crohn's disease. In these situations, clinical researchers are perhaps defining for the first time the real natural history of ulcerative colitis and Crohn's disease. In the area of autoimmunity and inflammatory bowel disease, the main priority is cloning and identifying putative autoantigens.

L43 ANSWER 46 OF 51 EMBASE COPYRIGHT 2001 ELSEVIER SCI. B.V.
ACCESSION NUMBER: 92250111 EMBASE
DOCUMENT NUMBER: 1992250111
TITLE: Natural history of superficial bladder cancer: Prognostic features and long-term disease course.
AUTHOR: Heney N.M.
CORPORATE SOURCE: Urological Associates, Massachusetts General Hospital, 55 Fruit Street,Boston, MA 02114, United States
SOURCE: Urologic Clinics of North America, (1992) 19/3 (429-433). ISSN: 0094-0143 CODEN: UCNADW
COUNTRY: United States
DOCUMENT TYPE: Journal; General Review
FILE SEGMENT: 016 Cancer
028 Urology and Nephrology
LANGUAGE: English
SUMMARY LANGUAGE: English
AB Superficial bladder cancer or, more accurately, stages Ta, T1, and Tis encompass a spectrum that ranges from innocuous to life-threatening lesions. There is growing evidence that Ta grade 1 tumors rarely become invasive; although when there is associated carcinoma in ***situ*** or severe dysplasia, the risk of invasiveness increases. Carcinoma in ***situ*** is treacherous, with unpredictable behavior. Predictors of recurrence and progression are beginning to be identified for the various superficial tumors.

L43 ANSWER 47 OF 51 EMBASE COPYRIGHT 2001 ELSEVIER SCI. B.V.
ACCESSION NUMBER: 92215655 EMBASE
DOCUMENT NUMBER: 1992215655
TITLE: Anti-sense RNA of 32-kDa laminin-binding protein inhibits attachment and invasion of a human colon carcinoma cell line.
AUTHOR: Mafune K.-I.; Ravikumar T.S.
CORPORATE SOURCE: Department of Surgery, Yale University School of Medicine, 333 Cedar Street,New Haven, CT 06510, United States
SOURCE: Journal of Surgical Research, (1992) 52/4 (340-346). ISSN: 0022-4804 CODEN: JSGRA2
COUNTRY: United States
DOCUMENT TYPE: Journal; Conference Article
FILE SEGMENT: 016 Cancer
022 Human Genetics
030 Pharmacology
037 Drug Literature Index
LANGUAGE: English
SUMMARY LANGUAGE: English
AB Tumor invasion and metastasis involves the interaction between tumor cells and ***basement*** ***membrane*** , which is mediated in part by laminin receptors/laminin-binding proteins. We have reported that a 32-kDa laminin- binding protein (LBP-32) was overexpressed in ***colorectal*** cancer at the messenger RNA (***mRNA***) level and correlated with clinical staging. However, the function of this protein is not yet

defined. In this study, we have analyzed the role of LBP-32 in tumor cell attachment and invasion through various ***basement*** ***membrane*** components. Blockade of LBP-32 synthesis with an anti-sense RNA was utilized in this study. The partial sequence (237 bp) of LBP-32 was inserted into the EMSV33 vector in the sense or anti-sense direction. Clone A, a poorly differentiated human colon carcinoma cell line, was transfected with EMSV33 alone (control), or EMSV33 with the insert in sense (LBP-S) or anti-sense (LBP-AS) direction using lipofectin.

The cell adhesion assays (at 37.degree.C for 75 min) were performed using parental Clone A cells or the transfectants. Specific attachment to wells coated with laminin, fibronectin, or type IV collagen was evaluated. In vitro cell invasion assays were performed using the parental clone A cells and their transfectants to assess the passage through polycarbonate filters coated with matrigel, a reconstituted ***basement*** ***membrane*** . The results showed that (a) laminin and collagen IV (but not fibronectin) play a role in colon cancer cell attachment to substrata, and (b) anti-sense RNA of LBP-32 inhibits tumor cell attachment and invasiveness in vitro. These findings suggest a role for LBP-32 in colon cancer progression and metastasis. Modulating LBP-32 expression by anti-sense RNA or monoclonal antibodies may have clinical application in ***colorectal*** cancer therapy.

L43 ANSWER 48 OF 51 EMBASE COPYRIGHT 2001 ELSEVIER SCI. B.V.
ACCESSION NUMBER: 92076678 EMBASE
DOCUMENT NUMBER: 1992076678
TITLE: Primary oat cell (neuroendocrine) carcinoma of the breast. Report of four cases.
AUTHOR: Papotti M.; Gherardi G.; Eusebi V.; Pagani A.; Bussolati G.
CORPORATE SOURCE: Dipartimento di Scienze, Biomediche e Oncologia Umana, Via Santena 7,I-10126 Turin, Italy
SOURCE: Virchows Archiv - A Pathological Anatomy and Histopathology, (1992) 420/1 (103-108).
ISSN: 0174-7398 CODEN: VAAHDJ
COUNTRY: Germany
DOCUMENT TYPE: Journal; Article
FILE SEGMENT: 003 Endocrinology
005 General Pathology and Pathological Anatomy
016 Cancer
LANGUAGE: English
SUMMARY LANGUAGE: English
AB Four cases of oat cell (neuroendocrine) carcinoma of the breast are reported. Three patients died within 15 months of the diagnosis and the fourth patient is alive after 44 months. Histochemical, ultrastructural and ***mRNA*** markers of endocrine differentiation were present in three cases. These tumours show histological similarities to breast ***metastases*** of bronchial oat cell carcinoma, but a distinguishing feature is the presence of in ***situ*** ductal lesions. It appears that the breast is a further site which has to be added to the long list of extrapulmonary oat cell carcinomas.

L43 ANSWER 49 OF 51 MEDLINE
ACCESSION NUMBER: 92065040 MEDLINE
DOCUMENT NUMBER: 92065040
TITLE: Phenotype and function of ***lamina*** ***propria***

T lymphocytes.
AUTHOR: Zeitz M; Schieferdecker H L; Ullrich R; Jahn H U; James S P; Riecken E O
CORPORATE SOURCE: Department of Gastroenterology, Free University of Berlin, FRG..
SOURCE: IMMUNOLOGIC RESEARCH, (1991) 10 (3-4) 199-206. Ref: 25
Journal code: IMR. ISSN: 0257-277X.
PUB. COUNTRY: Switzerland
Journal; Article; (JOURNAL ARTICLE)
General Review; (REVIEW)
(REVIEW, TUTORIAL)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 199203
AB ***Lamina*** ***propria*** T cells have a low expression of the CD45RA antigen and a high expression of the CD45RO antigen. This phenotype is characteristic for memory T cells (table 2). In addition, T cells in the effector compartment of the mucosa bear surface antigens which are very rarely found in other sites of the immune system. ***Intestinal*** T cells also express functional IL-2 receptors and IL-2 receptor alpha chain ***mRNA*** , and are able to synthesize high amounts of IL-2. However, another ***marker*** of memory T cells, CD29, is not expressed in high density in the ***lamina*** ***propria*** indicating that ***lamina*** ***propria*** T cells differ from 'classical' memory T cells. This is supported by functional studies in nonhuman primates infected rectally with C. trachomatis which show that ***lamina*** ***propria*** T cells do not proliferate after stimulation with antigen but rather provide helper function for immunoglobulin synthesis (table 2). The ***intestinal*** ***lamina*** ***propria*** therefore contains highly specialized T cells which have a distinctive phenotype and are activated. Functionally these T cells can be characterized as differentiated effector lymphocytes which respond to triggering the antigen-specific T cell receptor by secreting helper factors for B cells. This concept is supported by recent studies showing that the pattern of lymphokines produced by ***lamina*** ***propria*** T cells and the responsiveness to certain lymphokines differ from those of other lymphocyte populations [25]. ***Lamina*** ***propria*** T cells thus represent a subset of memory T cells with a unique maturational state.

L43 ANSWER 50 OF 51 MEDLINE
ACCESSION NUMBER: 87082064 MEDLINE
DOCUMENT NUMBER: 87082064
TITLE: Mucosal lymphocytes in the rat small intestine: phenotypical characterization in ***situ*** .
AUTHOR: van der Heijden F L
SOURCE: IMMUNOLOGY, (1986 Nov) 59 (3) 397-9.
Journal code: GH7. ISSN: 0019-2805.
PUB. COUNTRY: ENGLAND: United Kingdom
Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals; Cancer Journals
ENTRY MONTH: 198704
AB Lymphocyte subpopulations in the intestinal mucosa of the rat were quantified in ***situ*** and compared with data obtained by other authors using enzymic or mechanical methods (Selby et al., 1984; Gibson

et
al., 1985) in order to assess any selective loss of cell types or contamination with ***lamina*** ***propria*** lymphocytes after these enzymic or mechanical isolation procedures. Intraepithelial lymphocytes (IEL) were predominantly of the suppressor/cytotoxic phenotype
(MRC OX-8) and nearly all cells bore the pan T ***marker*** W3/13. About 10% of the IEL phenotypically belonged to the T-helper (W3/25) lineage. MRC OX-19, the rat equivalent of the mouse Lyt-1 antigen, was present on about 15% of the IEL. The main subpopulation of ***lamina*** ***propria*** T lymphocytes (T-LPL) showed a T-helper phenotype and a smaller subpopulation a suppressor/cytotoxic phenotype. Practically all T-LPL expressed the pan T ***marker*** W3/13, and half of these T cells were MRC OX-19+. The results proved to be in agreement with the data
obtained after enzymic or mechanical isolation procedures and indicate that proportional contamination with LPL is not likely to occur with these
methods.

L43 ANSWER 51 OF 51 MEDLINE
ACCESSION NUMBER: 84086027 MEDLINE
DOCUMENT NUMBER: 84086027
TITLE: Intestinal lymphocyte subpopulations in inflammatory bowel disease: an analysis by immunohistological and cell isolation techniques.
AUTHOR: Selby W S; Janossy G; Bofill M; Jewell D P
SOURCE: GUT, (1984 Jan) 25 (1) 32-40.
Journal code: FVT. ISSN: 0017-5749.
PUB. COUNTRY: ENGLAND: United Kingdom
Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Abridged Index Medicus Journals; Priority Journals
ENTRY MONTH: 198404
AB Lymphocyte subpopulations in the intestinal mucosa of patients with ulcerative colitis or Crohn's disease have been studied using a double ***marker*** immunofluorescence technique. Analysis of tissue sections
revealed that the majority of intraepithelial lymphocytes (IEL) were T cells (Hle-1+ HuTLA+ UCHT1+). Of these, over 80% were of suppressor-cytotoxic phenotype (OKT8+:83 +/- 10.2%) with a small population of helper type IEL (OKT4+). Only one third of OKT8+ IEL reacted
with the T cell antibody, anti-Leu-1. IEL were also Tac-, C3b-receptor- (C3RT05-), and Ig-. Within the ***lamina*** ***propria*** , OKT4+ T
cells predominated (ulcerative colitis 64 +/- 6.0%; Crohn's disease 63 +/-
6.0%). Less than half of the smaller OKT8+ population in the ***lamina*** ***propria*** was Leu-1+. These finding did not differ
from those seen in histologically normal tissues from controls, and are similar to those reported in the small intestine. Mononuclear cells were also isolated from the intestinal ***lamina*** ***propria*** using
an enzymatic technique. The majority of lymphocytes obtained were T cells (OKT3+), with populations of OKT4+ and OKT8+ cells. Comparison of the ratio of OKT4+ to OKT8+ lymphocytes determined by immunohistological analysis with that obtained in mucosal isolates, however, suggested that the isolation procedure may deplete OKT8+ cells. These findings indicate

that an imbalance of mucosal immunoregulatory T cells, as defined by monoclonal antibodies, does not occur in inflammatory bowel disease. They also emphasize that functional studies of isolated intestinal mucosal cells should be combined with morphological studies of cell populations in

situ .